

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ATOSSA THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other Jurisdiction of
incorporation or organization)

26-4753208
(I.R.S. Employer Identification No.)

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Seattle, Washington 98104
Telephone: (206) 588-0256
(Address, including zip code, and telephone number, including
area code, of Registrant's principal executive offices)

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Approximate Date of Commencement of Proposed Sale to the Public: From time to time after this Registration Statement becomes effective, as determined by the registrant.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is used to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act Registration Statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act Registration Statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

| | | | |
|-------------------------|-------------------------------------|---------------------------|-------------------------------------|
| Large accelerated filer | <input type="checkbox"/> | Accelerated filer | <input type="checkbox"/> |
| Non-accelerated filer | <input checked="" type="checkbox"/> | Smaller reporting company | <input checked="" type="checkbox"/> |
| | | Emerging growth company | <input type="checkbox"/> |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, dated May 13, 2024

PRELIMINARY PROSPECTUS



ATOSSA THERAPEUTICS, INC.

\$100,000,000
Common Stock
Preferred Stock
Debt Securities
Warrants

We may offer and sell an indeterminate number of shares of our common stock, preferred stock, debt securities and warrants from time to time under this prospectus. We may offer these securities separately or together in combination with other securities registered by this prospectus. We will describe in a prospectus supplement the securities we are offering and selling, as well as the specific terms of the securities.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. We may sell the securities directly to you, through agents we select, or through underwriters and dealers we select. If we use agents, underwriters or dealers to sell the securities, we will name them and describe their compensation in a prospectus supplement or sales agreement prospectus.

Our common stock, par value \$0.18, is currently quoted on the Nasdaq Capital Market under the symbol "ATOS". On May 10, 2024 the last reported sale price per share of our common stock on the Nasdaq Capital Market was \$1.49. You are urged to obtain current market quotations for our common stock.

Our principal executive offices are located at 107 Spring Street, Seattle, Washington 98104.

Investing in our securities involves risks. You should carefully consider the Risk Factors beginning on page 5 of this prospectus before you make an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2024

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a shelf registration process. Under the shelf registration process, we may offer shares of our common stock and preferred stock, various series of debt securities and warrants to purchase any of such securities with a total value of up to \$100,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement (which term includes, as applicable, the sales agreement prospectus filed with the registration statement of which this prospectus forms a part) that will describe the specific amounts, prices and other important terms of the securities.

We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. A prospectus supplement or free writing prospectus may include a discussion of risks or other special considerations applicable to us or the offered securities. A prospectus supplement or free writing prospectus may also add, update or change information in this prospectus. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you must rely on the information in the prospectus supplement. Please carefully read both this prospectus and the applicable prospectus supplement in their entirety together with additional information described under the heading "Where You Can Find Additional Information" in this prospectus. This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

We have not authorized any broker-dealer, salesperson or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any accompanying supplement to this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or any accompanying prospectus supplement. This prospectus and any accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy securities, nor do this prospectus and any accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation. The information contained in this prospectus and any accompanying prospectus supplement speaks only as of the date set forth on the cover page and you should assume that such information may not reflect subsequent changes in our business, financial condition, results of operations and prospects even though this prospectus and any accompanying prospectus supplement is delivered, or securities are sold, on a later date.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference into it contain, in addition to historical information, certain information, assumptions and discussions that may constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We have made these statements in reliance on the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are subject to certain risks and uncertainties, which could cause actual results to differ materially from those projected or anticipated. Although we believe our assumptions underlying our forward-looking statements are reasonable as of the date of this prospectus, we cannot assure you that the forward-looking statements set out in this prospectus will prove to be accurate. We typically identify these forward-looking statements by the use of forward-looking words such as "expect," "potential," "continue," "may," "will," "should," "could," "would," "seek," "intend," "plan," "estimate," "anticipate" or the negative version of those words or other comparable words. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- general macroeconomic conditions, including the impact of inflation, high interest rates, general economic slowdown or a recession, the prospect of a shutdown of the U.S. federal government, foreign exchange rate volatility, financial institution instability, changes in monetary policy and increasing geopolitical instability, including the conflict in Ukraine, the conflict in the Middle East and rising tensions between China and Taiwan, on our business, our ability to access capital markets, our operating costs and our supply chain;
- the effects of natural disasters, pandemics, severe weather conditions and other events beyond our control;
- whether we can obtain approval from the U.S. Food and Drug Administration (FDA), and foreign regulatory bodies, to continue our clinical trials, including our planned (Z)-endoxifen trials, and to sell, market and distribute our therapeutics under development;
- our ability to identify and partner with organizations to commercialize any of our products once they are approved for marketing;
- our ability to successfully initiate and complete clinical trials of our products under development, including our proprietary (Z)-endoxifen (an active metabolite of Tamoxifen);
- the success, costs and timing of our development activities, such as clinical trials, including whether our studies using our (Z)-endoxifen therapies will enroll a sufficient number of subjects in a timely fashion or be completed in a timely fashion or at all;
- whether we will successfully complete our clinical trial of oral (Z)-endoxifen in women with mammographic breast density and our trials of (Z)-endoxifen in women with breast cancer, and whether the studies will meet their objectives;
- our ability to contract with third-party suppliers, manufacturers and service providers, including clinical research organizations, and their ability to perform adequately;
- our ability to successfully develop and commercialize new therapeutics currently in development, or new therapeutics that we might identify in the future, and within the time frames we currently expect;
- our ability to successfully defend litigation and other similar complaints that may be brought in the future, in a timely manner and within the coverage, scope and limits of our insurance policies;
- our ability to establish and maintain intellectual property rights covering our products;
- our increased risk of theft or misappropriation of our intellectual property and other proprietary technology outside of the U.S.;
- our expectations regarding, and our ability to satisfy, federal, state and foreign regulatory requirements, including evolving legal standards and regulations, including those concerning data protection, consumer privacy, sustainability and evolving labor standards;
- our ability to comply with the continued listing requirements of the Nasdaq Capital Market (the Nasdaq);
- the accuracy of our estimates of the size and characteristics of the markets that our products and services may address;
- whether final study results will vary from preliminary study results that we may announce;
- our expectations as to future financial performance, expense levels and capital sources;

- our ability to attract and retain key personnel;
- our ability to execute our share repurchase program as planned; and
- our ability to raise capital.

This prospectus also contains estimates and other statistical data provided by independent parties and by us relating to market size and growth and other industry data. These and other forward-looking statements made in this prospectus are presented as of the date on which the statements are made. We have included important factors in the cautionary statements included in this prospectus, particularly in the section entitled "Risk Factors," that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any new information, future events or circumstances that may affect our business after the date of this prospectus. Except as required by law, we do not intend to update any forward-looking statements after the date on which the statement is made, whether as a result of new information, future events or circumstances or otherwise.

ABOUT THE COMPANY

We are a clinical-stage biopharmaceutical company developing proprietary innovative medicines in areas of significant unmet medical need in oncology with a focus on women's breast cancer and other breast conditions. Our lead drug candidate under development is oral (Z)-endoxifen, which we are developing for both the prevention and treatment of breast cancer.

Our business strategy is to advance our programs through clinical studies, including potentially with partners, and opportunistically add programs in areas of high unmet medical need through acquisition, minority investment, collaboration or internal development.

(Z)-endoxifen is an active metabolite of tamoxifen, which is an FDA-approved drug to treat and prevent breast cancer. Tamoxifen is a "pro-drug," in that it must be metabolized into active components ("metabolites") to be effective. Despite the success of tamoxifen in treating ER+ breast cancer, its systemic side effects have led to generally low acceptance as a therapy to reduce the risk of breast cancer. These systemic side effects relate to estrogen agonist activity on the endometrium and the activation of coagulation pathways, leading to an increased risk of uterine events and thromboembolism. Hot flashes and vaginal symptoms are additional barriers to tamoxifen being accepted in the prevention setting.

Other limiting aspects of tamoxifen are that some people lack liver enzymes to adequately metabolize it and it can take a long time for many patients to reach therapeutic levels. Up to 50% of breast cancer survivors who take tamoxifen do not achieve therapeutic (Z)-endoxifen levels (meaning they are "refractory") for a number of reasons, including that they, due to their genotype, do not have the requisite liver enzymes. We believe our proprietary oral (Z)-endoxifen, in part because it is not a pro-drug and does not need to be metabolized by the liver, may overcome some of the shortcomings of tamoxifen.

(Z)-endoxifen is a proprietary, novel Selective Estrogen Receptor Modulator (SERM); which is a class of drugs that blocks estrogen from connecting with breast cancer cells, with the intent of keeping the cells from multiplying. We are developing oral (Z)-endoxifen for the potential prevention and treatment of breast cancer. We have completed four Phase 1 clinical studies (including a study in men) and two Phase 2 clinical studies with our proprietary (Z)-endoxifen (including oral and topical formulations). We have also developed clinical manufacturing capabilities through qualified third parties.

Summary of Leading Programs

(Z)-endoxifen is currently being investigated in five ongoing Phase 2 trials:

EVANGELINE. A Phase 2 randomized study of (Z)-endoxifen as a neoadjuvant treatment for pre-menopausal women with Estrogen Receptor Positive (ER+) / Human Epidermal Growth Factor Receptor 2 negative (HER2-) breast cancer. The EVANGELINE study is expected to enroll 180 patients at sites across the U.S.

The EVANGELINE study began enrolling patients in February 2023 as part of a 40mg pharmacokinetic (PK) run-in cohort to assess whether 40mg/day achieved plasma concentrations required to optimally target protein kinase C beta (PKC- β) inhibition. The treatment was well tolerated and showed encouraging efficacy but did not reach the desired steady state plasma concentrations. Per the study protocol, an 80mg PK cohort run-in was initiated.

Targeting PKC- β could potentially further enhance (Z)-endoxifen's antitumor mechanism of action. The opportunity with inhibiting PKC- β is to induce apoptosis, which is programmed cell death where the malignant cells die. Apoptosis is the cellular equivalent of a self-destruct button and would be expected to lead to increased response rates evidenced by reduction or elimination of tumor lesions.

Karisma-Endoxifen. A Phase 2 study investigating (Z)-endoxifen in premenopausal women with measurable breast density (MBD). Participants in the study are randomized into one of three cohorts to receive a placebo, or 1mg or 2mg of (Z)-endoxifen daily for six months. Mammograms are conducted to measure reduction in breast density over the treatment period and a final mammogram will be conducted at 24 months to assess the durability of density changes. The study fully enrolled in November 2023, and we expect primary data in the second half of 2024.

Approximately half of the women in the world over the age of 40 have dense breasts and there are currently no approved treatments to reduce breast density. Elevated breast density can make a mammogram more difficult to interpret because dense breast tissue and some abnormal breast changes, such as calcifications and tumors, both appear as white areas in the mammogram. In women with the highest density, approximately 50% of breast cancers are missed on a mammogram

and diagnosed in the interval between two screening rounds. These are known as “interval cancers,” which are often larger, more advanced, and more difficult to treat. Additionally, women with the highest density are four to six times more likely to develop breast cancer in their lifetime compared to women with the least dense breasts.

As of September 2024, the U.S. Food and Drug Administration (FDA) will require mammogram providers to notify patients about the density of their breasts. The notification for patients with dense breasts will include a warning that dense tissue makes it harder to find breast cancer on a mammogram and raises their risk of developing breast cancer. It will also encourage women with dense breast tissue to discuss the findings with their healthcare provider.

Based on input received in March 2020 from the FDA and Swedish Medical Products Agency, reduction in MBD may not be an approvable indication unless we can demonstrate that (Z)-endoxifen also reduces the incidence of breast cancer. We may therefore conduct additional studies of (Z)-endoxifen to assess its correlation with the risk of breast cancer and/or reduction in the incidence of new breast cancers.

I-SPY 2. A Phase 2 trial investigating (Z)-endoxifen in the neoadjuvant treatment setting, which is the window of time between a diagnosis and the primary treatment. The intent of neoadjuvant therapy is to slow the growth of the cancer or even shrink the cancer prior to surgery. Doing this helps surgery to be more effective and could alter the surgical approach; meaning some breast cancer patients could have a lumpectomy instead of a mastectomy. Neoadjuvant therapy has also been shown to reduce the likelihood that the cancer returns.

The I-Spy 2 trial is being conducted through a partnership with Quantum Leap Healthcare Collaborative, which was established in 2005 by medical researchers at University of California, San Francisco and Silicon Valley entrepreneurs to speed the development of innovative breast cancer therapies like (Z)-endoxifen. The platform trial is enrolling patients with newly diagnosed (ER+) invasive breast cancer. Participants in the (Z)-endoxifen arm are treated with 10mg daily for up to 24 weeks prior to surgery. Efficacy measures include reduction in Ki-67, a marker for tumor cell proliferation, and objective response rate as measured by MRI. The (Z)-endoxifen treatment cohort of 20 participants completed full enrollment in the first quarter of 2024 with data expected in the second half of 2024.

I-Spy 2 Combo. A Phase 2 trial to evaluate our proprietary (Z)-endoxifen in combination with abemaciclib (VERZENIO®), a cyclin-dependent kinase (CDK) 4/6 inhibitor marketed by Eli Lilly and Company, in women with ER+/HER2- breast cancer. The new study arm is expected to enroll approximately 20 women with newly diagnosed Estrogen Receptor positive (ER+) / Human Epidermal Growth Factor Receptor 2 negative (HER2-) invasive breast cancer. Participants are expected to receive (Z)-endoxifen once daily in combination with abemaciclib twice daily for a total of 24 weeks prior to surgery.

RECAST DCIS. A Phase 2 platform study investigating (Z)-endoxifen in women diagnosed with Ductal Carcinoma In Situ (DCIS). The goal of the study, which was initiated in October 2023, is to prevent the progression of DCIS to breast cancer. Participants receive six months of treatment with 10mg of (Z)-endoxifen daily with the intent of determining their suitability for long-term active surveillance without surgery. On February 22, 2024, the first patient was dosed with our proprietary SERM (Z)-endoxifen.

DCIS is the presence of abnormal cells inside a milk duct in the breast. It is considered to be the earliest form of breast cancer and is noninvasive, meaning it has not spread beyond the milk duct. DCIS is usually found during a mammogram done as part of breast cancer screening or to investigate a breast lump. There are approximately 60,000 DCIS diagnoses made each year in the United States alone.

Currently, there is no way to predict which patients diagnosed with DCIS will progress to invasive breast cancer. As a result, aggressive local therapy, identical to the way invasive breast cancer is treated, is the current standard of care. For most patients, this involves mastectomy or lumpectomy, radiation, and hormone therapy for five years. If treatment with (Z)-endoxifen can effectively halt the progression of DCIS, it would potentially spare a significant percentage of patients diagnosed with this disease from aggressive, invasive, or potentially unnecessary treatment.

Other Programs; Immunotherapy/CAR-T Programs

Other Program. On July 6, 2023, we announced a strategic, sponsored research agreement with Weill Cornell Medicine to study the potential of inducing estrogen receptor expression in triple-negative breast cancer (TNBC). The goal of the research is to determine if treating TNBC with extracellular vesicles carrying the estrogen receptor can change the cancer phenotype and turn on the estrogen receptor. Converting the tumor to ER+ would make it sensitive to hormone therapy, including treatment with (Z)-endoxifen. This could potentially fundamentally transform the treatment approach and outlook for patients diagnosed with TNBC.

Investment in CAR-T Company. On December 23, 2022, we closed our investment in DCT, a privately-held, venture-capital backed, developer of CAR-T therapies. DCT is in the pre-clinical phase of developing controllable CAR-T cells to address difficult-to-treat cancers. Its platform technology of dynamic control of engineered T-cells is designed to improve the safety, efficacy, and durability of CAR-T cell therapies. While its initial focus is hematologic malignancies, it's possible that its innovative approach could also have broad applicability in solid tumors and autoimmune diseases.

Much of the recent successes in the field of chimeric antigen receptor therapy, or CAR-T, has relied on the systemic delivery (for example, a needle injection into the blood stream) of the CAR-T which is intended to treat various non-solid tumor cancers, such as blood cancers. One concern with this systemic approach is that it does not target the location of the cancer and it can have adverse effects, including deadly "cytokine storms." Moreover, CAR-T treatments delivered systemically can be as high as \$500,000 per patient.

We have filed patent applications on a novel method to deliver CAR-T cells or other types of immunotherapy into the milk ducts of the breast, the location where most breast cancers originate for the potential targeted treatment of breast cancer. This approach uses targeted intraductal delivery of either T-cells that have been genetically modified to attack breast cancer cells or various other immune-therapies. We believe this intraductal method has several potential advantages, including the reduction of toxicity by limiting systemic exposure of the T-cells or immunotherapy; improved efficacy by placing the T-cells or immunotherapy in direct contact with the target ductal epithelial cells that are undergoing or have undergone malignant transformation; and, lymphatic migration of the CAR-T cells or immunotherapy potentially extending their cytotoxic actions into the regional lymph system, which could limit tumor cell dissemination or metastasis. Moreover, our approach may be more cost effective if lower doses of therapy can be delivered compared to systemic CAR-T. We have not begun, and may not be successful in completing, pre-clinical and clinical studies of our CAR-T technology.

RISK FACTORS

Investors should carefully consider the risks and uncertainties and all other information contained or incorporated by reference in this prospectus, including the risks and uncertainties discussed under “Risk Factors” in our most recent Annual Report on Form 10-K, as may be amended from time to time, and in subsequent filings, including our most recent Quarterly Report on Form 10-Q, that are incorporated herein by reference. All of these “Risk Factors” are incorporated by reference herein in their entirety. These risks and uncertainties are not the only ones facing us. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the incorporated documents also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned in this prospectus.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of our securities offered hereby. Except as described in any prospectus supplement, we currently anticipate using the net proceeds from the sale of our securities offered hereby primarily for general corporate purposes, which include, but are not limited to, funding our ongoing and future development of our drugs and devices under development, and for general and administrative expenses. We may also use a portion of the net proceeds to pay off outstanding indebtedness, if any, and/or acquire or invest in complementary businesses, products and technologies. Further, from time to time we may evaluate acquisition opportunities and engage in related discussions with other companies. Pending the use of the net proceeds, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities.

PLAN OF DISTRIBUTION

We may sell the securities covered by this prospectus from time to time in one or more offerings. Registration of the securities covered by this prospectus does not mean, however, that those securities will necessarily be offered or sold.

We may sell the securities separately or together:

- through one or more underwriters or dealers in a public offering and sale by them;
- directly to investors; or
- through agents.

We may sell the securities from time to time:

- in one or more transactions at a fixed price or prices, which may be changed from time to time;
- at market prices prevailing at the times of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We will describe the method of distribution of the securities and the terms of the offering in the prospectus supplement. Any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

If underwriters are used in the sale of any securities, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions described above. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters, or directly by underwriters. Generally, the underwriters' obligations to purchase the securities will be subject to conditions precedent and the underwriters will be obligated to purchase all of the securities if they purchase any of the securities. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement or in a post-effective amendment.

Underwriters, dealers and agents may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments made by the underwriters, dealers or agents, under agreements between us and the underwriters, dealers and agents.

We may grant underwriters who participate in the distribution of securities an option to purchase additional securities to cover over-allotments, if any, in connection with the distribution.

Underwriters, dealers or agents may receive compensation in the form of discounts, concessions or commissions from us or our purchasers, as their agents in connection with the sale of securities. These underwriters, dealers or agents may be considered to be underwriters under the Securities Act. As a result, discounts, commissions or profits on resale received by the underwriters, dealers or agents may be treated as underwriting discounts and commissions. The prospectus supplement will identify any such underwriter, dealer or agent and describe any compensation received by them from us. Any initial public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

Unless otherwise specified in the related prospectus supplement, all securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. Any common stock sold pursuant to a prospectus supplement will be listed for trading on the Nasdaq Capital Market or other principal market for our common stock. We may apply to list any series of debt securities, preferred stock or warrants on an exchange, but we are not obligated to do so. Therefore, there may not be liquidity or a trading market for any series of securities.

Any underwriter may engage in over-allotment transactions, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. We make no representation or prediction as to the direction or magnitude of any effect that such transactions may have on the price of the securities. For a description of these activities, see the information under the heading "Underwriting" or "Plan of Distribution" in the applicable prospectus supplement.

Underwriters, broker-dealers or agents who may become involved in the sale of the common stock may engage in transactions with and perform other services for us in the ordinary course of their business for which they receive compensation.

SECURITIES WE MAY OFFER

We may offer shares of our common stock, preferred stock, various series of debt securities and warrants to purchase any such securities with a total value of up to \$100,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities.

DESCRIPTION OF CAPITAL STOCK

The following is a summary of the material terms of our capital stock, as well as other material terms of certain provisions of the Delaware General Corporation Law (the "DGCL"), and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Amended and Restated Certificate of Incorporation, as amended (the "certificate of incorporation") and our Amended and Restated Bylaws (the "bylaws"), each of which are incorporated herein by reference. For more information on how you can obtain our certificate of incorporation and bylaws, see the heading "Where You Can Find Additional Information."

Common Stock

Authorized Shares. We are authorized to issue up to 175,000,000 shares of common stock.

Voting Rights. The holders of our common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. When a quorum is present at any meeting of our stockholders, the affirmative vote of a majority of the votes properly cast on the matter (excluding any abstentions or broker non-votes) will be the act of the stockholders with respect to all matters other than the contested election of directors (which will be elected by a plurality of all votes properly cast), or as otherwise provided in the bylaws, the certificate of incorporation or a preferred stock designation, or as otherwise required by law.

Dividends. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of our common stock are entitled to receive ratably all dividends, if any, as may be declared from time to time by our Board of Directors out of the funds legally available.

Other Rights. In the event of the liquidation, dissolution or winding up of the Company, the holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding. The common stock has no preemptive or conversion rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and non-assessable.

Transfer Agent and Registrar. The transfer agent and registrar for our common stock is VStock Transfer.

Listing. Our common stock is currently listed on The Nasdaq Capital Market under the symbol "ATOS".

Preferred Stock

We may issue shares of our preferred stock from time to time, in one or more series. Under our certificate of incorporation, our board of directors has the authority, without further action by stockholders, to designate up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, qualifications and restrictions granted to or imposed upon the preferred stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be greater than the rights of the common stock.

If we issue preferred stock, we will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designations relating to that series. If we issue preferred stock, we will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designations that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you to read the prospectus supplement related to any series of preferred stock we may offer, as well as the complete certificate of designations that contains the terms of the applicable series of preferred stock.

Series A Junior Participating Preferred Stock. On May 22, 2014, the Company filed a Certificate of Designation, Preferences, and Rights of Series A Junior Participating Preferred Stock with the Delaware Secretary of State creating 750,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the "Series A Junior Participating Preferred Stock". Our Stockholder Rights Agreement, dated May 19, 2014, provides that all stockholders of record on May 26, 2014 received a non-taxable dividend distribution of one right ("Right") for each share of our common stock held by such stockholder, and each share of common stock issued after May 26, 2014 and prior to the Distribution Date (as defined below), and in certain circumstances, after the Distribution Date, will be issued together with one Right. Each Right is attached to and trades with the associated share of common stock. The Rights will become exercisable only

upon the earlier of (the "Distribution Date"): (1) ten days following a public announcement that a person has become an "Acquiring Person" by acquiring beneficial ownership of 15% or more of our common stock (or, in the case of a person who beneficially owned 15% or more of our common stock on the date the Stockholder Rights Agreement was executed, by acquiring beneficial ownership of additional shares representing 2.0% of our common stock then outstanding (excluding compensatory arrangements)); or (2) ten business days after a person commences a tender offer that, if consummated, would result in such person becoming an Acquiring Person. As of and after the Distribution Date, the Rights will separate from the shares of common stock and each Right will become exercisable to purchase one one-hundredth of a share of Series A Junior Participating Preferred Stock at a purchase price of \$15.00 (the "Purchase Price"), subject to adjustment. This portion of Series A Junior Participating Preferred Stock would give the holder thereof approximately the same dividend, voting, and liquidation rights as would one share of common stock. In the event that a person becomes an Acquiring Person, each holder of a Right will thereafter have the right to receive, upon exercise, shares of common stock (or, in certain circumstances, other securities, cash, or other assets of the Company) having a value equal to two times the Purchase Price. Notwithstanding any of the foregoing, following the occurrence of a person becoming an Acquiring Person, all Rights that are, or (under certain circumstances specified in the Stockholder Rights Agreement) were, beneficially owned by any Acquiring Person (or by certain related parties) will be null and void. However, Rights are not exercisable following the occurrence of a person becoming an Acquiring Person until such time as the Rights are no longer redeemable by the Company. In the event that, at any time after a person has become an Acquiring Person, (i) the Company engages in a merger or other business combination transaction in which the Company is not the continuing or surviving corporation or other entity, (ii) the Company engages in a merger or other business combination transaction in which the Company is the continuing or surviving corporation and the shares of common stock of the Company are changed or exchanged, or (iii) 50% or more of the Company's assets or earning power is sold or transferred, each holder of a Right (except Rights that have previously been voided as set forth above) shall thereafter have the right to receive, upon exercise, common shares of the acquiring company having a value equal to two times the Purchase Price. As of the date of this prospectus, no shares of Series-A Junior Participating Preferred Stock are outstanding. The Rights will expire on the earliest of (a) 5:00 p.m., Eastern time, on May 26, 2024, (b) the time at which the Rights are redeemed, and (c) the time at which the Rights are exchanged in full.

Series A Convertible Preferred Stock. On March 31, 2017, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock with the Delaware Secretary of State creating 4,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the "Series A Convertible Preferred Stock". As of the date of this prospectus, no shares of Series A Convertible Preferred Stock are outstanding. The terms and provisions of our Series A Convertible Preferred Stock are:

Conversion. Each share of Series A Convertible Preferred Stock is convertible at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series A Convertible Preferred Stock by an initial conversion price of \$1,333.33 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series A Convertible Preferred Stock will not have the right to convert any portion of the Series A Convertible Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

Fundamental Transactions. In the event the Company effects certain mergers, consolidations, sales of substantially all of its assets, tender or exchange offers, reclassifications, or share exchanges in which its common stock is effectively converted into or exchanged for other securities, cash or property, the Company consummates a business combination in which another person acquires 50% of the outstanding shares of its common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by its issued and outstanding common stock, then, upon any subsequent conversion of the Series A Convertible Preferred Stock, the holders of the Series A Convertible Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series A Convertible Preferred Stock.

Dividends. Holders of Series A Convertible Preferred Stock shall be entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock. The Series A Convertible Preferred Stock contractually entitles the holders of such securities to participate in dividends but do not contractually require the holders of such securities to participate in losses of the Company.

Voting Rights. Except as otherwise provided in the certificate of designation or as otherwise required by law, the Series A Convertible Preferred Stock has no voting rights.

Liquidation Preference. Upon the Company's liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series A Convertible Preferred Stock will be entitled to receive out of the Company's assets, whether capital or surplus, the same amount that a holder of common stock would receive if the Series A Convertible Preferred Stock were fully converted (disregarding for such purpose any conversion limitations under the certificate of designation) to common stock, which amounts shall be paid pari passu with all holders of common stock.

Redemption Rights. The Company is not obligated to redeem or repurchase any shares of Series A Convertible Preferred Stock. Shares of Series A Convertible Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous provisions.

Series B Convertible Preferred Stock. On May 29, 2018, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock with the Delaware Secretary of State creating 25,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the "Series B Convertible Preferred Stock". As of the date of this prospectus, 582 shares of Series B Convertible Preferred Stock are outstanding. The terms and provisions of our Series B Convertible Preferred Stock are:

Conversion. Each share of Series B Convertible Preferred Stock is convertible at our option at any time on or after the first anniversary of the closing of the rights offering or at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series B Convertible Preferred Stock by an initial conversion price of \$3.52 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series B Convertible Preferred Stock will not have the right to convert any portion of the Series B Convertible Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

Fundamental Transactions. In the event the Company effects certain mergers, consolidations, sales of substantially all of its assets, tender or exchange offers, reclassifications, or share exchanges in which its common stock is effectively converted into or exchanged for other securities, cash or property, the Company consummates a business combination in which another person acquires 50% of the outstanding shares of its common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by its issued and outstanding common stock, then, upon any subsequent conversion of the Series B Convertible Preferred Stock, the holders of the Series B Convertible Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series B Convertible Preferred Stock.

Dividends. Holders of Series B Convertible Preferred Stock shall be entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock. The Series B Convertible Preferred Stock contractually entitles the holders of such securities to participate in dividends but do not contractually require the holders of such securities to participate in losses of the Company.

Voting Rights. Except as otherwise provided in the certificate of designation or as otherwise required by law, the Series B Convertible Preferred Stock has no voting rights.

Liquidation Preference. Upon the Company's liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series B Convertible Preferred Stock will be entitled to receive out of the Company's assets, whether capital or surplus, the same amount that a holder of common stock would receive if the Series B Convertible Preferred Stock were fully converted (disregarding for such purpose any conversion limitations under the certificate of designation) to common stock, which amounts shall be paid pari passu with all holders of common stock.

Redemption Rights. The Company is not obligated to redeem or repurchase any shares of Series B Convertible Preferred Stock. Shares of Series B Convertible Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous provisions.

Series C Convertible Preferred Stock. On December 9, 2020, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock with the Delaware Secretary of State creating 20,000 shares of a series of authorized preferred stock, par value \$0.001 per share, designated as the “Series C Convertible Preferred Stock”. As of the date of this prospectus, no shares of Series C Convertible Preferred Stock are outstanding. The terms and provisions of our Series C Convertible Preferred Stock are:

Conversion. Each share of Series C Convertible Preferred Stock is convertible at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series C Convertible Preferred Stock by an initial conversion price of \$1.00 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series C Convertible Preferred Stock will not have the right to convert any portion of the Series C Convertible Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

Fundamental Transactions. In the event we effect certain mergers, consolidations, sales of substantially all of our assets, tender or exchange offers, reclassifications or share exchanges in which our common stock is effectively converted into or exchanged for other securities, cash or property, we consummate a business combination in which another person acquires 50% of the outstanding shares of our common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by our issued and outstanding common stock, then, upon any subsequent conversion of the Series C Convertible Preferred Stock, the holders of the Series C Convertible Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series C Convertible Preferred Stock.

Dividends. Holders of Series C Convertible Preferred Stock shall be entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock.

Voting Rights. Except as otherwise provided in the certificate of designation or as otherwise required by law, the Series C Convertible Preferred Stock has no voting rights.

Liquidation Preference. Upon our liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series C Convertible Preferred Stock will be entitled to receive out of our assets, whether capital or surplus, the same amount that a holder of common stock would receive if the Series C Convertible Preferred Stock were fully converted (disregarding for such purpose any conversion limitations under the certificate of designation) to common stock, which amounts shall be paid pari passu with all holders of common stock.

Redemption Rights. We are not obligated to redeem or repurchase any shares of Series C Convertible Preferred Stock. Shares of Series C Convertible Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous provisions.

Certain Provisions Affecting Control of the Company

Certificate of Incorporation and Bylaw Provisions. Some provisions of the DGCL and our certificate of incorporation and bylaws contain provisions that could make the following transactions more difficult:

- acquisition of us by means of a tender offer;
- acquisition of us by means of a proxy contest or otherwise; or
- removal of our incumbent officers and directors.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids and to promote stability in our management. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our Board of Directors.

Undesignated Preferred Stock. The ability to authorize undesignated preferred stock makes it possible for our Board of Directors to issue one or more series of preferred stock with voting or other rights or preferences that could impede the

success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Advance Notice Procedures. The advance notice procedures in our bylaws with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all such stockholder notices. These requirements may have the effect of precluding stockholders from bringing proposals relating to the nomination of candidates for election as directors or new business before the stockholders at an annual or special meeting.

Delaware Anti-Takeover Statute. We are subject to Section 203 of the DGCL. This law prohibits a publicly held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 of the DGCL defines “business combination” to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the corporation’s assets involving the interested stockholder;
- in general, any transaction that results in the issuance or transfer by the corporation of any of its stock to the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 of the DGCL defines an “interested stockholder” as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under an indenture to be entered into between us and a trustee to be named in a prospectus supplement. The indenture will be qualified under the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"). We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indentures is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as "discount securities," which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with "original issue discount," or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the form of the debt securities of the series;
- the applicability of any guarantees;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;
- if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;
- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depositary for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;
- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;
- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;
- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any and principal amounts of the debt securities of the series to any holder that is not a "United States person" for federal tax purposes;
- any restrictions on transfer, sale or assignment of the debt securities of the series; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

Events of Default and Remedies

Unless otherwise described in the applicable prospectus supplement, an event of default with respect to any series of debt securities will be defined in the indenture or applicable supplemental indenture or authorizing resolution as being:

- our failure to pay interest on any debt security of such series when the same becomes due and payable and the continuance of any such failure for a period of 30 days;
- our failure to pay the principal or premium of any debt security of such series when the same becomes due and payable at maturity, upon acceleration, redemption or otherwise;
- our failure or the failure of any restricted subsidiary to comply with any of its agreements or covenants in, or provisions of, the debt securities of such series or the indenture (as they relate thereto) and such failure continues for a period of 60 days after our receipt of notice of the default from the trustee or from the holders of at least 25% in aggregate principal amount of the then outstanding debt securities of that series (except in the case of a default with respect to the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of the assets of us (or any other provision specified in the applicable supplemental indenture or authorizing resolution), which will constitute an event of default with notice but without passage of time);
- default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any indebtedness (other than non-recourse indebtedness, as defined in the indenture) for money borrowed by us or any of our restricted subsidiaries (or the payment of which is guaranteed by us or any of our restricted subsidiaries), whether such indebtedness or guarantee now exists or is created after the date we issue debt securities, if that default: (a) is caused by a failure to pay at final stated maturity the principal amount of such indebtedness prior to the expiration of the grace period provided in such indebtedness on the date of such default (a "Payment Default"); or (b) results in the acceleration of such indebtedness prior to its express maturity without such indebtedness having been discharged or such acceleration having been cured, waived, rescinded or annulled for the period and after the notice had been provided, and, in each case, the principal amount of any such indebtedness, together with the principal amount of any other such indebtedness under which there has been a Payment Default or the maturity of which has been so accelerated, aggregates \$50 million or more; or
- certain events of bankruptcy, insolvency or reorganization occur with respect to us or any restricted subsidiary that is a significant subsidiary (as defined in the indenture).

The indenture will provide that the trustee may withhold notice to the holders of any series of debt securities of any default, except a default in payment of principal or interest, if any, with respect to such series of debt securities, if the trustee considers it in the interest of the holders of such series of debt securities to do so.

The indenture will provide that if any event of default has occurred and is continuing with respect to any series of debt securities, the trustee or the holders of not less than 25% in principal amount of such series of debt securities then outstanding may declare the principal of all the debt securities of such series to be due and payable immediately. However, the holders of a majority in principal amount of the debt securities of such series then outstanding by notice to the trustee may waive any existing default and its consequences with respect to such series of debt securities, other than any event of default in payment of principal or interest. Holders of a majority in principal amount of the then outstanding debt securities of any series may rescind an acceleration with respect to such series and its consequences, except an acceleration due to nonpayment of principal or interest on such series, if the rescission would not conflict with any judgment or decree and if all existing events of default with respect to such series have been cured or waived.

The holders of a majority of the outstanding principal amount of the debt securities of any series will have the right to direct the time, method and place of conducting any proceedings for any remedy available to the trustee with respect to such series, subject to limitations specified in the indenture.

Defeasance

The indenture will permit us to terminate all our respective obligations under the indenture as they relate to any particular series of debt securities, other than the obligation to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay principal of and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

The indenture will also permit us to terminate all of our respective obligations under the indenture as they relate to any particular series of debt securities, including the obligations to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay principal and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that (A) we have received from, or there has been published by, the Internal Revenue Service a ruling, or (B) since the date such series of debt securities were originally issued, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such opinion of counsel shall state that, holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

In addition, the indenture will permit us to terminate substantially all our respective obligations under the indenture as they relate to a particular series of debt securities by depositing with the trustee money or government obligations sufficient to pay all principal and interest on such series at its maturity or redemption date if the debt securities of such series will become due and payable at maturity within one year or are to be called for redemption within one year of the deposit.

Transfer and Exchange Rights

A holder will be able to transfer or exchange debt securities only in accordance with the indenture. The registrar may require a holder, among other things, to furnish appropriate endorsements and transfer documents, and to pay any taxes and fees required by law or permitted by the indenture.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

Amendment, Supplement and Waiver

Without notice to or the consent of any holder, we and the trustee may amend or supplement the indenture or the debt securities of a series to:

- cure any ambiguity, omission, defect or inconsistency;
- comply with the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of our assets;

- provide that specific provisions of the indenture shall not apply to a series of debt securities not previously issued or to make a change to specific provisions of the indenture that only applies to any series of debt securities not previously issued or to additional debt securities of a series not previously issued;
- create a series and establish its terms;
- provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- add a guarantor subsidiary in respect of any series of debt securities;
- secure any series of debt securities;
- comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act;
- make any change that does not adversely affect the rights of any holder; or
- conform the provisions of the indenture to the final offering document in respect of any series of debt securities.

With the exceptions discussed below, we and the trustee may amend or supplement the indenture or the debt securities of a particular series with the written consent of the holders of at least a majority in principal amount of the debt securities of such series then outstanding. In addition, the holders of a majority in principal amount of the debt securities of such series then outstanding may waive any existing default under, or compliance with, any provision of the debt securities of a particular series or of the indenture relating to a particular series of debt securities, other than any event of default in payment of interest or principal. These consents and waivers may be obtained in connection with a purchase of, or tender offer or exchange offer for, debt securities. Without the consent of each holder affected, we and the trustee may not:

- reduce the amount of debt securities of such series whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest, including defaulted interest;
- reduce the principal of or extend the fixed maturity of any debt security or alter the provisions with respect to redemptions or mandatory offers to repurchase debt securities;
- make any change that adversely affects any right of a holder to convert or exchange any debt security into or for shares of our common shares or other securities, cash or other property in accordance with the terms of such security;
- modify the ranking or priority of the debt securities;
- make any change to any provision of the indenture relating to the waiver of existing defaults, the rights of holders to receive payment of principal and interest on the debt securities, or to the provisions regarding amending or supplementing the indenture or the debt securities of a particular series with the written consent of the holders of such series;
- waive a continuing default or event of default in the payment of principal of or interest on the debt securities; or
- make any debt security payable at a place or in money other than that stated in the debt security, or impair the right of any holder of a debt security to bring suit as permitted by the indenture.

The right of any holder to participate in any consent required or sought pursuant to any provision of the indenture, and our obligation to obtain any such consent otherwise required from such holder, may be subject to the requirement that such holder shall have been the holder of record of debt securities with respect to which such consent is required or sought as of a record date fixed by us in accordance with the indenture.

Governing Law

The laws of the State of New York will govern the indenture and the debt securities.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the warrants that we may issue under this prospectus, which may consist of warrants to purchase common shares, preference shares or debt securities and may be issued in one or more series. Warrants may be issued independently or together with common shares, preference shares or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, if any, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants being offered, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common shares or preference shares, the number of common shares or preference shares, as the case may be, purchasable upon the exercise of one warrant and the price at which, and the currency in which, these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- the terms of any rights to force the exercise of the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special United States federal income tax consequences of holding or exercising the warrants;

- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common shares or preference shares, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent in connection with the exercise of the warrant.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Upon any purchase of common shares pursuant to the exercise of a warrant, the holder of such common shares will be subject to the provisions of our amended and restated by-laws which provide that any U.S. person, other than any excluded person, whose controlled shares would constitute 9.5% or more of the total voting power of our issued share capital, will have their aggregate votes reduced by our board of directors to the extent necessary such that the controlled shares of such U.S. person will constitute less than 9.5% of the voting power of all issued and outstanding shares, all as further described above under “Description of Share Capital—Common Shares.”

Governing Law

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements will be governed by and construed in accordance with the laws of the State of New York.

DESCRIPTION OF UNITS

We may issue units consisting of any combination of common stock, preferred stock, debt securities or warrants to purchase shares of our common stock, shares of our preferred stock or debt securities offered under this prospectus in one or more series. We may elect to evidence each series of units by unit certificates that we will issue under a separate unit agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms, and we will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of each unit agreement relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain U.S. federal income tax considerations applicable to the units; and
- any other material terms of the units and their constituent securities.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2023 as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

The consolidated financial statements of Atossa Therapeutics Inc. as of December 31, 2022 and for the year then ended incorporated by reference in this Prospectus and in the Registration Statement have been so incorporated in reliance on the report of BDO USA, LLP (n/k/a BDO USA, P.C.), an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

LEGAL MATTERS

Certain legal matters relating to the validity of the securities offered by this prospectus will be passed upon for us by Gibson, Dunn & Crutcher LLP, San Francisco, California.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

The Company files annual, quarterly and special reports, proxy statements and other information with the SEC. The SEC maintains an Internet site that contains all reports and other information that we file electronically with the SEC. The address of that website is www.sec.gov.

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement (or incorporated by reference). Neither we nor any agent, underwriter or dealer has authorized any person to provide you with information that is different from that contained in this prospectus or in any free writing prospectus we may authorize to be delivered or made available to you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We maintain a website at www.atossatherapeutics.com. Information contained in or accessible through our website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus. This means that we can disclose important information about us and our financial condition to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be a part of this prospectus, except any information that is superseded by information that is included in a document subsequently filed with the SEC.

This prospectus incorporates by reference the documents listed below that we have previously filed with the SEC and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, from the date of this prospectus until the termination of an offering of securities, except that we are not incorporating by reference any information furnished (and not filed) with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K:

- The Company’s Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the SEC on April 1, 2024 (including the portions of our Proxy Statement for our 2024 Annual General Meeting of Shareholders incorporated by reference therein);
- The Company’s Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2024 filed with the SEC on [May 13, 2024](#);
- The Company’s Current Reports on Forms 8-K filed with the SEC on [March 12, 2024](#) and [March 18, 2024](#) (in each case, except for information contained therein which is furnished rather than filed);
- The description of the Company’s Common Stock contained in the registration statement on [Form 8-A](#) filed with the Commission on July 24, 2012 pursuant to Section 12 of the Exchange Act, including any amendment or report filed for the purpose of updating that description; and
- All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date of the original Registration Statement and prior to effectiveness of the registration statement of which this prospectus is a part, provided that all documents “furnished” by the Company to the SEC and not “filed” are not deemed incorporated by reference herein.

Any statement contained in a document, all or a portion of which is incorporated or deemed to be incorporated by reference herein, will be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified will not be deemed to constitute a part hereof, except as so modified, and any statement so superseded will not be deemed to constitute a part hereof.

A copy of any document incorporated by reference in this prospectus may be obtained at no cost by writing or telephoning us at the following address and telephone number:

Atossa Therapeutics, Inc.
107 Spring Street
Seattle, Washington 98104
(206) 588-0256

We maintain a website at www.atossatherapeutics.com. Information about us, including our reports filed with the SEC, is available through that site. Such reports are accessible at no charge through our website and are made available as soon as reasonably practicable after such material is filed with or furnished to the SEC. Our website and the information contained on that website, or connected to that website, are not incorporated by reference in this prospectus.

You may read and copy any materials we file with the SEC at the SEC’s website mentioned under the heading “Where You Can Find Additional Information.” The information on the SEC’s website is not incorporated by reference in this prospectus.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. Other Expenses of Issuance and Distribution

The following are the estimated expenses of the distribution of the Shares registered hereunder on Form S-3:

| | | |
|---|----|--------|
| Registration Fee—Securities and Exchange Commission | \$ | 14,760 |
| Accountants Fees and Expenses | \$ | 35,000 |
| Legal Fees and Expenses | \$ | 10,000 |
| Miscellaneous | \$ | 5,000 |
| Total | \$ | 64,760 |

The amounts set forth above, except for the SEC Registration Fee, are estimated.

ITEM 15. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law, or the DGCL, authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We have adopted provisions in our certificate of incorporation and bylaws that limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, our bylaws provide that:

- we will indemnify our directors, officers and, in the discretion of our Board of Directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our Board of Directors, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We have entered into indemnification agreements with each of our directors and certain of our executive officers. These agreements provide that we will indemnify each of these directors and executive officers to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees, judgments, fines and settlement amounts, to each indemnified director, executive officer or affiliate in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as an officer or director brought on behalf of the Company or in furtherance of our rights.

We maintain general liability insurance that covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

ITEM 16. Exhibit Index.

| Exhibit No. | Description | Incorporated by Reference Herein or Filed or Furnished Herewith | |
|-------------|---|---|------|
| | | Form | Date |
| 1.1 | Form of Underwriting Agreement* | * | * |
| 4.1 | Form of Senior Indenture | Filed herewith | |
| 4.2 | Form of Debt Security* | * | * |
| 4.3 | Form of Preferred Stock Certificate* | * | * |
| 4.4 | Form of Certificate of Designations* | * | * |
| 4.5 | Form of Warrant Agreement* | * | * |
| 4.6 | Form of Warrant Certificate* | * | * |
| 5.1 | Opinion of Gibson, Dunn & Crutcher LLP | Filed herewith | |
| 23.1 | Consent of Ernst & Young, LLP | Filed herewith | |
| 23.2 | Consent of BDO USA, P.C. | Filed herewith | |
| 23.3 | Consent of Gibson, Dunn & Crutcher LLP (included in Exhibit 5.1 hereto) | Filed herewith | |
| 24.1 | Powers of Attorney (included in signature page of this Form S-3) | Filed herewith | |
| 25.1 | Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended** | * | * |
| 107 | Filing Fee Table | Filed herewith | |

* To be filed by amendment or as an exhibit to a report filed under the Exchange Act and incorporated herein by reference.

** To be filed, if necessary, separately under electronic form type "305B2" in accordance with Section 305(b)(2) of the Trust Indenture Act of 1939, as amended.

ITEM 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in this Registration Statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of this Registration Statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act, as amended, may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the

securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue. The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act ("Act") in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Act.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Seattle, Washington, on May 13, 2024.

Atossa Therapeutics, Inc.

By: /s/ Steven C. Quay

Steven C. Quay, M.D., Ph.D.

Chairman, President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints Steven C. Quay and Heather Rees as their true and lawful attorney-in-fact and agent, with full power of substitution, for them and in their name, place and stead, in any and all capacities, to sign this registration statement and any and all amendments thereto, including post-effective amendments, and to file the same, with all exhibits thereto, any related registration filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as they might or could do in person, hereby ratifying and confirming all the said attorney-in-fact and agent or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-3 has been signed by the following persons in the capacities and on the dates indicated.

| <u>Signature</u> | <u>Office(s)</u> | <u>Date</u> |
|--|---|--------------|
| <u>/s/ Steven C. Quay</u> Steven C. Quay, M.D., Ph.D. | Chairman, President and Chief Executive Officer (Principal Executive Officer) | May 13, 2024 |
| <u>/s/ Heather Rees</u> Heather Rees | Senior Vice President, Finance and Accounting (Principal Financial and Accounting Officer) | May 13, 2024 |
| <u>/s/ Richard I. Steinhart</u> Richard I. Steinhart | Director | May 13, 2024 |
| <u>/s/ Shu-Chih Chen</u> Shu-Chih Chen, Ph.D. | Director | May 13, 2024 |
| <u>/s/ Jonathan Finn</u> Jonathan Finn | Director | May 13, 2024 |
| <u>/s/ Stephen J. Galli</u> Stephen J. Galli, M.D. | Director | May 13, 2024 |
| <u>/s/ H. Lawrence Rimmel</u> H. Lawrence Rimmel | Director | May 13, 2024 |
| <u>/s/ Tessa Cigler</u> Tessa Cigler, M.D., M.P.H. | Director | May 13, 2024 |

ATOSSA THERAPEUTICS, INC.

Debt Securities

Indenture

Dated as of []

[],

as Trustee

CROSS-REFERENCE TABLE

This Cross-Reference Table is not a part of the
Indenture

| TIA Section | Indenture Section |
|-----------------------|-------------------|
| 310(a)(1) | 7.10 |
| (a)(2) | 7.10 |
| (a)(3) | N.A. |
| (a)(4) | N.A. |
| (b) | 7.08; 7.10; 12.02 |
| 311(a) | 7.11 |
| (b) | 7.11 |
| (c) | N.A. |
| 312(a) | 2.05 |
| (b) | 12.03 |
| (c) | 12.03 |
| 313(a) | 7.06 |
| (b)(1) | N.A. |
| (b)(2) | 7.06 |
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| (d) | 7.06 |
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| (b) | N.A. |
| (c)(1) | 12.04 |
| (c)(2) | 12.04 |
| (c)(3) | N.A. |
| (d) | N.A. |
| (e) | 12.05 |
| 315(a) | 7.01(b) |
| (b) | 7.05; 12.02 |
| (c) | 7.01(a) |
| (d) | 7.01(c) |
| (e) | 6.11 |
| 316(a)(last sentence) | 12.06 |
| (a)(1)(A) | 6.05 |
| (a)(1)(B) | 6.04 |
| (a)(2) | N.A. |
| (b) | 6.07 |
| 317(a)(1) | 6.08 |
| (a)(2) | 6.09 |
| (b)d | 2.04 |
| 318(a) | 12.01 |

N.A. means Not Applicable.

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SIGNATURES

EXHIBIT A – Form of Security

INDENTURE dated as of [], (the “**Base Indenture**”), by and among **ATOSSA THERAPEUTICS, INC.**, a Delaware corporation (the “**Company**”), and [], as trustee (the “**Trustee**”).

Each party agrees as follows for the benefit of the other party and for the equal and ratable benefit of the Holders of the Company’s debt securities issued under this Base Indenture:

**ARTICLE ONE
DEFINITIONS AND INCORPORATION BY REFERENCE**

Section 1.01 Definitions.

“**Affiliate**” means, when used with reference to a specified person, any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Person specified.

“**Agent**” means any Registrar, Paying Agent or co-Registrar or agent for service of notices and demands.

“**Authorizing Resolution**” means a resolution adopted by the Board of Directors or by an Officer or committee of Officers pursuant to Board delegation authorizing a Series of Securities which shall be delivered to the Trustee.

“**Bankruptcy Law**” means Title 11 of the United States Code, as amended, or any similar federal or state law for the relief of debtors.

“**Board of Directors**” means the Board of Directors of the Company or any duly authorized committee thereof.

“**Capital Stock**” means, with respect to any Person, any and all shares, interests, participations or other equivalents (however designated) of or in such Person’s capital stock or other equity interests.

“**Capitalized Lease Obligations**” of any Person means, at the time any determination thereof is to be made, the obligations of such Person to pay rent or other amounts under a lease that is required to be capitalized for financial reporting purposes in accordance with GAAP, and the amount of such obligations will be the capitalized amount thereof determined in accordance with GAAP.

“**Company**” means the party named as such in this Indenture until a successor replaces it pursuant to the Indenture and thereafter means the successor.

“**control**” means, when used with respect to any Person, the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms “controlling” and “controlled” have meanings correlative to the foregoing.

“**Currency Agreement**” of any Person means any foreign exchange contract, currency swap agreement or other similar agreement or arrangement designed to protect such Person or any of its Subsidiaries against fluctuations in currency values.

“**Default**” means any event, act or condition that is, or after notice or the passage of time or both would be, an Event of Default.

“**Definitive Security**” means a certificated Security registered in the name of the Securityholder thereof.

“**Depository**” means, with respect to Securities of any Series which the Company shall determine will be issued in whole or in part as a Global Security, DTC, another clearing agency, or any successor registered as a clearing agency under the Exchange Act, and any other applicable U.S. or foreign statute or regulation, which, in each case, shall be designated by the Company pursuant to Section 2.01.

“**Dollars**” and “**\$**” mean United States Dollars.

“**DTC**” means The Depository Trust Company.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

“**Foreign Currency**” means any currency, currency unit or composite currency, including, without limitation, the euro, issued by the government of one or more countries other than the United States of America or by any recognized confederation or association of such governments and reasonably acceptable to the Trustee.

“**GAAP**” means generally accepted accounting principles set forth in the accounting standards codification of the Financial Accounting Standards Board or in such other statements by such or any other entity as may be approved by a significant segment of the accounting profession of the United States, as in effect on the date of this Base Indenture.

“**Global Security**” means, with respect to any Series of Securities, a Security executed by the Company and delivered by the Trustee to the Depository or pursuant to the Depository’s instruction, all in accordance with the Indenture, which shall be registered in the name of the Depository or its nominee.

“**Government Obligations**” means securities which are (i) direct obligations of the United States or the other government or governments in the confederation which issued the Foreign Currency in which the principal of or any interest on the Security of the applicable Series shall be payable, in each case for the payment of which its full faith and credit is pledged or (ii) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States or such other government or governments, in each case the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States or such other government or governments, which, in either case are not callable or redeemable at the option of the issuer or issuers thereof, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such Government Obligations or a specific payment of interest on or principal of any such Government Obligation held by such custodian for the account of the holder of a depository receipt; *provided* that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depository receipt from any amount received by the custodian in respect of the Government Obligation or the specific payment of interest on or principal of the Government Obligation evidenced by such depository receipt.

“**Holder**” or “**Securityholder**” means the Person in whose name a Security is registered on the Registrar’s books.

“**Indebtedness**” means, with respect to any specified Person, any indebtedness of such Person, whether or not contingent:

- (1) in respect of borrowed money;
- (2) evidenced by bonds, notes, debentures or similar instruments;
- (3) in respect of letters of credit (or reimbursement agreements in respect thereof) or banker’s acceptances;
- (4) representing Capitalized Lease Obligations;
- (5) in respect of the balance deferred and unpaid of the purchase price of any property, except (i) any such balance that constitutes an accrued expense or trade payable, or (ii) any obligation to pay a contingent purchase price as long as such obligation remains contingent; or
- (6) in respect of any Interest Protection Agreement or Currency Agreement,

if and to the extent any of the preceding items (other than letters of credit and any Interest Protection Agreement or Currency Agreement) would appear as a liability upon a balance sheet of the specified Person prepared in accordance with GAAP. In addition, the term "Indebtedness" includes all Indebtedness of others secured by a Lien on any asset of the specified Person (whether or not such Indebtedness is assumed by the specified Person) and, to the extent not otherwise included, the guarantee by such Person of any indebtedness of any other Person.

Except as otherwise expressly provided in this Indenture, the amount of any Indebtedness outstanding as of any date shall be:

- (a) with respect to contingent obligations, the maximum liability upon the occurrence of the contingency giving rise to the obligation;
- (b) with respect to any Interest Protection Agreement or Currency Agreement, the net amount payable thereunder if such agreement were terminated at that time due to default by such Person;
- (c) the accreted value thereof, in the case of any Indebtedness issued at a discount to par; or
- (d) except as provided above, the principal amount or liquidation preference thereof, in the case of any other Indebtedness.

"Indenture" means this Base Indenture as amended or supplemented from time to time, including pursuant to any Authorizing Resolution or supplemental indenture pertaining to any Series, and including, for all purposes of this instrument and any such Authorizing Resolution or supplemental indenture, the provisions of the TIA that are deemed to be a part of and govern this Base Indenture and any such Authorizing Resolution or supplemental indenture, respectively.

"Interest Protection Agreement" of any Person means any interest rate swap agreement, interest rate collar agreement, option or futures contract or other similar agreement or arrangement designed to protect such Person or any of its Subsidiaries against fluctuations in interest rates with respect to Indebtedness.

"Issue Date" means, with respect to any Series of Securities, the date on which the Securities of such Series are originally issued under this Indenture.

"Lien" means, with respect to any Property, any mortgage, deed of trust, lien, pledge, charge, hypothecation, security interest or encumbrance of any kind in respect of such Property. For purposes of this definition, a Person shall be deemed to own, subject to a Lien, any Property which it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such Property.

"Non-Recourse Indebtedness" with respect to any Person means Indebtedness of such Person for which (i) the sole legal recourse for collection of principal and interest on such Indebtedness is against the specific Property identified in the instruments evidencing or securing such Indebtedness (and any accessions thereto and proceeds thereof) and such Property was acquired with the proceeds of such Indebtedness or such Indebtedness was incurred within 180 days after the acquisition of such Property and (ii) no other assets of such Person may be realized upon in collection of principal or interest on such Indebtedness. Indebtedness which is otherwise Non-Recourse Indebtedness will not lose its character as Non-Recourse Indebtedness because there is recourse to the borrower, any guarantor or any other Person for (i) environmental or tax warranties and indemnities and such other representations, warranties, covenants and indemnities as are customarily required in such transactions, or (ii) indemnities for and liabilities arising from fraud, misrepresentation, misapplication or non-payment of rents, profits, insurance and condemnation proceeds and other sums actually received by the borrower from secured assets to be paid to the lender, waste and mechanics' liens.

"NYUCC" means the New York Uniform Commercial Code, as in effect from time to time.

"Officer" means the Chairman of the Board, the President, any Vice President, the Treasurer, the Controller or the Secretary of the Company.

"Officers' Certificate" means a certificate signed by two Officers or by an Officer and an Assistant Treasurer or an Assistant Secretary of the Company.

"Opinion of Counsel" means a written opinion, in form and substance reasonably satisfactory to the Trustee, from legal counsel. The counsel may be an employee of or counsel to the Company. Each such opinion shall include the statements provided for in Section 12.05 if and to the extent required by the provisions of such Section.

"Person" means any individual, corporation, partnership, limited liability company, joint venture, incorporated or unincorporated association, joint stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

"principal" of a debt security means the principal of the security *plus*, when appropriate, the premium, if any, on the security.

"Property" of any Person means all types of real, personal, tangible, intangible or mixed property owned by such Person, whether or not included in the most recent consolidated balance sheet of such Person and its Subsidiaries under GAAP.

"Restricted Subsidiary" means any Subsidiary of the Company which is not an Unrestricted Subsidiary.

"SEC" means the Securities and Exchange Commission or any successor agency performing the duties now assigned to it under the TIA.

"Securities" means any Securities that are issued under this Base Indenture.

"Securities Act" means the Securities Act of 1933, as amended.

"Series" means a series of Securities established under this Base Indenture.

"Significant Subsidiary" means any Subsidiary of the Company which would constitute a "significant subsidiary" as defined in Rule 1.02 of Regulation S-X under the Securities Act and the Exchange Act.

"Subsidiary" of any Person means any corporation or other entity of which a majority of the Capital Stock having ordinary voting power to elect a majority of the board of directors of such entity or other persons performing similar functions is at the time directly or indirectly owned or controlled by such Person.

"TIA" means the Trust Indenture Act of 1939, as in effect from time to time, except as otherwise provided herein.

"Trustee" means the party named as such in this Base Indenture until a successor replaces it pursuant to this Base Indenture and thereafter means the successor serving hereunder; *provided, however*, that if at any time there is more than one such Person, "Trustee" as used with respect to the Securities of any Series shall mean only the Trustee with respect to Securities of that Series.

"Trust Officer" means, when used with respect to the Trustee, any officer within the corporate trust department of the Trustee, including any vice president, assistant vice president, assistant secretary, senior associate, associate, trust officer or any other officer of the Trustee who customarily performs functions similar to those performed by the Persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of such person's knowledge of and familiarity with the particular subject and who shall have direct responsibility for the administration of this Indenture.

“United States” means the United States of America.

“Unrestricted Subsidiary” means, with respect to any Series, any Subsidiary of the Company (1) so designated by a resolution adopted by the Board of Directors of the Company as provided below and (2) any Subsidiary of an Unrestricted Subsidiary, subject, in each case, to such conditions as may be stated in the supplemental indenture or specified in the Authorizing Resolution with respect to such Series.

Section 1.02 Other Definitions.

| Term | Defined in Section |
|---------------------|---------------------------|
| Agent Members | 2.15 |
| Base Indenture | Preamble |
| Business Day | 12.07 |
| Covenant Defeasance | 8.01 |
| Custodian | 6.01 |
| Event of Default | 6.01 |
| Legal Defeasance | 8.01 |
| Legal Holiday | 12.07 |
| Paying Agent | 2.03 |
| Payment Default | 6.01 |
| Registrar | 2.03 |
| Security Register | 2.03 |
| Successor | 5.01 |

Section 1.03 Incorporation by Reference of Trust Indenture Act.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture. The following TIA terms used in this Indenture have the following meanings:

“Commission” means the SEC.

“indenture securities” means the Securities of a particular Series.

“indenture security holder” means a Securityholder.

“indenture to be qualified” means this Indenture.

“indenture trustee” or “institutional trustee” means the Trustee.

“obligor” on the indenture securities means the Company or any other obligor on the Securities of a Series.

All other TIA terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule have the meanings so assigned to them.

Section 1.04 Rules of Construction.

Unless the context otherwise requires:

- (1) a term has the meaning assigned to it herein;
- (2) an accounting term not otherwise defined has the meaning assigned to it in accordance with GAAP and all accounting determinations shall be made in accordance with GAAP;
- (3) “or” is not exclusive and “including” means “including without limitation”;

- (4) words in the singular include the plural, and in the plural include the singular;
- (5) "herein," "hereof" and "hereunder," and other words of similar import, refer to this Indenture as a whole (including any Authorizing Resolution or supplemental indenture relating to the relevant Series) and not to any particular Article, Section or other subdivision;
- (6) all exhibits are incorporated by reference herein and expressly made a part of this Indenture; and
- (7) any transaction or event shall be considered "permitted by" or made "in accordance with" or "in compliance with" this Indenture or any particular provision thereof if such transaction or event is not expressly prohibited by this Indenture or such provision, as the case may be.

ARTICLE TWO THE SECURITIES

Section 2.01 Form and Dating.

The aggregate principal amount of Securities that may be issued under this Base Indenture is unlimited. The Securities may be issued from time to time in one or more Series. Each Series shall be created by an Authorizing Resolution or a supplemental indenture that establishes the terms of the Series, which may include the following:

- (1) the title of the Series;
- (2) the aggregate principal amount (or any limit on the aggregate principal amount) of the Series and, if any Securities of a Series are to be issued at a discount from their face amount, the method of computing the accretion of such discount;
- (3) the interest rate or method of calculation of the interest rate;
- (4) the date from which interest will accrue;
- (5) the record dates for interest payable on Securities of the Series;
- (6) the dates when, places where and manner in which principal and interest are payable;
- (7) the Registrar and Paying Agent;
- (8) the terms of any mandatory (including any sinking fund requirements) or optional redemption by the Company;
- (9) the terms of any redemption at the option of Holders;
- (10) the permissible denominations in which Securities of such Series are issuable, if different from \$2,000 and multiples of \$1,000 in excess thereof;
- (11) whether Securities of such Series will be issued in registered or bearer form and the terms of any such forms of Securities;
- (12) whether the Securities of the Series shall be issued in whole or in part in the form of a Global Security or Securities, the terms and conditions, if different from those contained in this Base Indenture, upon which such Global Security or Securities may be exchanged in whole or in part for Definitive Securities; the Depositary for such Global Security or Securities; the form of any legend or legends, if any, to be borne by any such Global Security or Securities in addition to or in lieu of the legends referred to in Section 2.15;

- (13) the currency or currencies (including any composite currency) in which principal or interest or both may be paid;
- (14) if payments of principal or interest may be made in a currency other than that in which Securities of such Series are denominated, the manner for determining such payments, including the time and manner of determining the exchange rate between the currency in which such Securities are denominated and the currency in which such Securities or any of them may be paid, and any deletions from or modifications of or additions to the terms of this Indenture to provide for or to facilitate the issuance of Securities denominated or payable, at the election of the Company or a Holder thereof or otherwise, in a Foreign Currency;
- (15) provisions for electronic issuance of Securities or issuance of Securities of such Series in uncertificated form;
- (16) any Events of Default, covenants and/or defined terms in addition to or in lieu of those set forth in this Base Indenture;
- (17) whether and upon what terms Securities of such Series may be defeased or discharged if different from the provisions set forth in this Base Indenture;
- (18) the form of the Securities of such Series, which, unless the Authorizing Resolution or supplemental indenture otherwise provides, shall be in the form of Exhibit A;
- (19) any terms that may be required by or advisable under applicable law;
- (20) the percentage of the principal amount of the Securities of such Series which is payable if the maturity of the Securities of such Series is accelerated in the case of Securities issued at a discount from their face amount;
- (21) whether Securities of such Series will or will not have the benefit of guarantees and the Company's Subsidiaries that will be the initial guarantors of such Series and, if applicable, the terms and conditions upon which such guarantees may be subordinated to other indebtedness of the respective guarantors;
- (22) whether the Securities of such Series are senior or subordinated debt securities, and if subordinated debt securities, the terms of such subordination;
- (23) whether the Securities of the Series will be convertible into or exchangeable for other Securities, common shares or other securities of any kind of the Company or another obligor, and, if so, the terms and conditions upon which such Securities will be so convertible or exchangeable, including the initial conversion or exchange price or rate or the method of calculation, how and when the conversion price or exchange ratio may be adjusted, whether conversion or exchange is mandatory, at the option of the holder or at the Company's option, the conversion or exchange period, and any other provision in relation thereto; and
- (24) any other terms in addition to or different from those contained in this Base Indenture applicable to such Series.

All Securities of one Series need not be issued at the same time and, unless otherwise provided, a Series may be reopened for issuances of additional Securities of such Series pursuant to an Authorizing Resolution, an Officers' Certificate or in any indenture supplemental hereto.

The creation and issuance of a Series and the authentication and delivery thereof are not subject to any conditions precedent.

Section 2.02 Execution and Authentication.

One Officer shall sign the Securities for the Company by manual or facsimile signature.

If an Officer whose signature is on a Security no longer holds that office at the time the Trustee authenticates the Security, the Security shall nevertheless be valid.

A Security shall not be valid until the Trustee manually signs the certificate of authentication on the Security. The signature shall be conclusive evidence that the Security has been authenticated under this Base Indenture.

At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication. Each Security shall be dated the date of its authentication. The Trustee shall authenticate Securities for original issue upon receipt of, and shall be fully protected in relying upon:

- (a) An order to the Trustee signed by an officer of the Company directing the Trustee to authenticate the Securities;
- (b) a copy of the resolution or resolutions of the Board of Directors in or pursuant to which the terms and form of the Securities were established, certified by the Secretary or an Assistant Secretary of the Company to have been duly adopted by the Board of Directors and to be in full force and effect as of the date of such certificate, and if the terms and form of such Securities are established by an Officers' Certificate pursuant to general authorization of the Board of Directors, such Officers' Certificate;
- (c) an Officers' Certificate of the Company delivered in accordance with Section 12.04; and
- (d) an Opinion of Counsel delivered in accordance with Section 12.04, and that states that such Securities, when authenticated and delivered by Trustee and issued by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and legally binding obligations of the Company, enforceable in accordance with their terms, subject to bankruptcy, insolvency, reorganization and other laws of general applicability relating to or affecting the enforcement of creditors' rights and to general equity principles.

The Trustee shall have the right to decline to authenticate and deliver any Securities under this Section if the Trustee, being advised by counsel, determines that such action may not lawfully be taken or if the Trustee in good faith shall determine that such action would expose the Trustee to personal liability to existing Holders.

Section 2.03 Registrar and Paying Agent.

The Company shall maintain an office or agency where Securities may be presented for registration of transfer or where Securities of a Series that are convertible or exchangeable may be surrendered for conversion or exchange ("**Registrar**"), an office or agency where Securities may be presented for payment ("**Paying Agent**") and an office or agency where notices and demands to or upon the Company in respect of the Securities and this Indenture may be served. The Registrar shall keep a register of the Securities and of their transfer and exchange (the "**Security Register**"). The Company may have one or more co-Registrars and one or more additional paying agents. The term "Paying Agent" includes any additional paying agent.

The Company shall enter into an appropriate agency agreement with any Agent not a party to this Base Indenture. The agreement shall implement the provisions of this Indenture that relate to such Agent. The Company shall promptly notify the Trustee in writing of the name and address of any such Agent and the Trustee shall have the right to inspect the Securities Register at all reasonable times to obtain copies thereof, and the Trustee shall have the right to rely upon such register as to the names and addresses of the Holders and the principal amounts and certificate numbers thereof. If the Company fails to maintain a Registrar or Paying Agent or fails to give the foregoing notice, the Trustee shall act as such. The Company initially appoints the Trustee as Registrar and Paying Agent.

Section 2.04 Paying Agent to Hold Money in Trust.

Each Paying Agent shall hold in trust for the benefit of Securityholders and the Trustee all money held by the Paying Agent for the payment of principal of or interest on the Securities, and shall notify the Trustee of any default by the Company in making any such payment. If the Company or a Subsidiary acts as Paying Agent, it shall segregate the money and hold it as a separate trust fund. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee. Upon doing so the Paying Agent shall have no further liability for the money.

Section 2.05 Securityholder Lists.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Securityholders. If the Trustee is not the Registrar, the Company shall furnish to the Trustee at least five (5) Business Days before each semiannual interest payment date and at such other times as the Trustee may request in writing a list in such form and as of such date as the Trustee may reasonably require of the names and addresses of Securityholders.

Section 2.06 Transfer and Exchange.

Where a Security is presented to the Registrar or a co-Registrar with a request to register a transfer, the Registrar shall register the transfer as requested if the other provisions of this Section 2.06 are satisfied. Where Securities are presented to the Registrar or a co-Registrar with a request to exchange them for an equal principal amount of Securities of other denominations, the Registrar shall make the exchange as requested if the same requirements are met. To permit transfers and exchanges, the Trustee shall authenticate Securities at the Registrar's request. The Registrar need not transfer or exchange any Security selected for redemption or repurchase, except the unredeemed or repurchased part thereof if the Security is redeemed or repurchased in part, or transfer or exchange any Securities for a period of 15 days before a selection of Securities to be redeemed or repurchased. Any exchange or transfer shall be without charge, except that the Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto except in the case of exchanges pursuant to 2.09, 3.06, or 10.05 not involving any transfer.

Any Holder of a Global Security shall, by acceptance of such Global Security, agree that transfers of beneficial interests in such Global Security may be effected only through a book entry system maintained by the Holder of such Global Security (or its agent), and that ownership of a beneficial interest in the Security shall be required to be reflected in a book entry.

Section 2.07 Replacement Securities.

If the Holder of a Security claims that the Security has been lost, destroyed, mutilated or wrongfully taken, the Company shall issue and execute a replacement security and, upon written request of any Officer of the Company, the Trustee shall authenticate such replacement Security. If any such lost, destroyed, mutilated or wrongfully taken Security shall have matured or shall be about to mature, the Company may, instead of issuing a substitute Security therefor, pay such Security without requiring (except in the case of a mutilated Security) the surrender thereof. An indemnity bond must be sufficient in the judgment of the Company and the Trustee to protect the Company, the Trustee and any Agent from any loss which any of them may suffer if a Security is replaced, including the acquisition of such Security by a bona fide purchaser. The Company and the Trustee may charge for its expenses in replacing a Security.

Section 2.08 Outstanding Securities.

Securities outstanding at any time are all Securities authenticated by the Trustee except for those cancelled by it and those described in this Section. A Security does not cease to be outstanding because the Company or one of its Affiliates holds the Security.

If a Security is replaced pursuant to Section 2.07, it ceases to be outstanding unless the Trustee receives proof satisfactory to the Company that the replaced Security is held by a "protected purchaser" (as such term is defined in the NYUCC).

If the Paying Agent holds on a redemption date, purchase date or maturity date money sufficient to pay Securities payable on that date, then on and after that date such Securities cease to be outstanding and interest on them ceases to accrue.

Subject to the foregoing provisions of this Section, each Security delivered under this Indenture upon registration of transfer of or in exchange for or in lieu of any other Security shall carry the rights to interest accrued and unpaid, and to accrue, which were carried by such other Security.

Section 2.09 Temporary Securities.

Until definitive Securities are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities. Temporary Securities shall be substantially in the form of definitive Securities but may have variations that the Company considers appropriate for temporary Securities. Without unreasonable delay, the Company shall prepare and, upon surrender for cancellation of the temporary Security, the Company shall execute and the Trustee shall authenticate definitive Securities in exchange for temporary Securities. Until so exchanged, the temporary Securities shall in all respects be entitled to the same benefits under this Indenture as definitive Securities authenticated and delivered hereunder.

Section 2.10 Cancellation.

The Company at any time may deliver Securities to the Trustee for cancellation. The Registrar and Paying Agent shall forward to the Trustee any Securities surrendered to them for registration of transfer, exchange, redemption, purchase or payment. The Trustee and no one else shall cancel and dispose of such cancelled or tendered securities, or retain in accordance with its standard retention policy, all Securities surrendered for registration of transfer, exchange, redemption, purchase, payment or cancellation. Unless the Authorizing Resolution or supplemental indenture so provides, the Company may not issue new Securities to replace Securities that it has previously paid or delivered to the Trustee for cancellation.

Section 2.11 Defaulted Interest.

If the Company defaults in a payment of interest on the Securities of any Series, it shall pay the defaulted interest *plus* any interest payable on the defaulted interest to the persons who are Securityholders of such Series on a subsequent special record date. The Company shall fix such special record date and a payment date which shall be reasonably satisfactory to the Trustee. At least 15 days before such special record date, the Company shall send to each Securityholder of the relevant Series a notice that states the record date, the payment date and the amount of defaulted interest to be paid. On or before the date such notice is sent, the Company shall deposit with the Paying Agent money sufficient to pay the amount of defaulted interest to be so paid. The Company may pay defaulted interest in any other lawful manner if, after written notice given by the Company to the Trustee of the proposed payment, such manner of payment shall be deemed practicable by the Trustee.

Section 2.12 Treasury Securities.

In determining whether the Holders of the required principal amount of Securities of a Series have concurred in any direction, waiver, consent or notice, Securities owned by the Company or any of its Affiliates shall be considered as though they are not outstanding, except that for the purposes of determining whether the Trustee shall be protected in relying on any such direction, waiver or consent, only Securities which a Trust Officer of the Trustee actually knows are so owned shall be so considered.

Section 2.13 CUSIP/ISIN Numbers.

The Company in issuing the Securities of any Series may use a "CUSIP" and/or "ISIN" or other similar number, and if so, the Trustee shall use the CUSIP and/or ISIN or other similar number in notices of redemption or exchange as a convenience to Holders of such Securities; *provided* that no representation is hereby deemed to be made by the Trustee as to the correctness or accuracy of any such CUSIP and/or ISIN or other similar number printed in the notice or on such Securities, and that reliance may be placed only on the other identification numbers printed on such Securities. The Company shall promptly notify the Trustee in writing of any change in any CUSIP and/or ISIN or other similar number.

Section 2.14 Deposit of Moneys.

Prior to 11:00 a.m. New York City time on each interest payment date and maturity date with respect to each Series of Securities, the Company shall have deposited with the Paying Agent in immediately available funds money in the applicable currency sufficient to make cash payments due on such interest payment date or maturity date, as the case may be, in a timely manner which permits the Paying Agent to remit payment to the Holders of such Series on such interest payment date or maturity date, as the case may be.

Section 2.15 Book-Entry Provisions for Global Security.

(a) Any Global Security of a Series initially shall (i) be registered in the name of the Depository or the nominee of such Depository, (ii) be delivered to the Trustee as custodian for such Depository and (iii) bear any required legends.

Members of, or participants in, the Depository ("**Agent Members**") shall have no rights under this Indenture with respect to any Global Security held on their behalf by the Depository, or the Trustee as its custodian, or under the Global Security, and the Depository may be treated by the Company, the Trustee and any agent of the Company or the Trustee as the absolute owner of the Global Security for all purposes whatsoever. Notwithstanding the foregoing, nothing herein shall prevent the Company, the Trustee or any agent of the Company or the Trustee from giving effect to any written certification, proxy or other authorization furnished by the Depository or impair, as between the Depository and its Agent Members, the operation of customary practices governing the exercise of the rights of a Holder of any Security.

(b) Transfers of any Global Security shall be limited to transfers in whole, but not in part, to the Depository, its successors or their respective nominees. Interests of beneficial owners in the Global Security may be transferred or exchanged for Definitive Securities in accordance with the rules and procedures of the Depository. In addition, Definitive Securities shall be transferred to all beneficial owners in exchange for their beneficial interests in a Global Security if (i) the Depository notifies the Company that it is unwilling or unable to continue as Depository for the Global Security and a successor depository is not appointed by the Company within 90 days of such notice or (ii) an Event of Default has occurred and is continuing and the Registrar has received a request from the Depository to issue Definitive Securities.

(c) In connection with any transfer or exchange of a portion of the beneficial interest in any Global Security to beneficial owners pursuant to paragraph (b), the Registrar shall (if one or more Definitive Securities are to be issued) reflect on its books and records the date and a decrease in the principal amount of the Global Security in an amount equal to the principal amount of the beneficial interest in the Global Security to be transferred, and the Company shall execute, and the Trustee shall authenticate and deliver, one or more Definitive Securities of like Series and amount.

(d) In connection with the transfer of an entire Global Security to beneficial owners pursuant to paragraph (b), the Global Security shall be deemed to be surrendered to the Trustee for cancellation, and the Company shall execute, and the Trustee shall authenticate and deliver, to each beneficial owner identified by the Depository in exchange for its beneficial interest in the Global Security, an equal aggregate principal amount of Definitive Securities of the same Series in authorized denominations.

(e) The Holder of any Global Security may grant proxies and otherwise authorize any person, including Agent Members and persons that may hold interests through Agent Members, to take any action which a Holder is entitled to take under this Indenture or the Securities of such Series.

(f) Unless otherwise provided in the Authorizing Resolution or supplemental indenture for a particular Series of Securities, each Global Security of such Series shall bear legends in substantially the following forms:

“THIS GLOBAL SECURITY IS HELD BY THE DEPOSITARY (AS DEFINED IN THE INDENTURE GOVERNING THIS SECURITY) OR ITS NOMINEE IN CUSTODY FOR THE BENEFIT OF THE HOLDERS OF BENEFICIAL INTERESTS HEREIN, AND IS NOT TRANSFERABLE TO ANY PERSON UNDER ANY CIRCUMSTANCES EXCEPT THAT (I) THE TRUSTEE MAY MAKE ANY SUCH NOTATIONS HEREON AS MAY BE REQUIRED PURSUANT TO THE INDENTURE, (II) THIS GLOBAL SECURITY MAY BE EXCHANGED IN WHOLE BUT NOT IN PART PURSUANT TO SECTION 2.06 OF THE INDENTURE, (III) THIS GLOBAL SECURITY MAY BE DELIVERED TO THE TRUSTEE FOR CANCELLATION PURSUANT TO THE INDENTURE AND (IV) THIS GLOBAL SECURITY MAY BE TRANSFERRED TO A SUCCESSOR DEPOSITARY WITH THE PRIOR WRITTEN CONSENT OF THE COMPANY.”

“UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR TO ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY. UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY TRUST COMPANY, A NEW YORK CORPORATION (“DTC”), TO ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE, OR PAYMENT, ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.”

Section 2.16 No Duty to Monitor.

The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Security (including any transfers between or among Agent Members or beneficial owners of interests in any Global Security) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

Neither the Trustee nor any Agent shall have any responsibility for any actions taken or not taken by the Depositary.

ARTICLE THREE REDEMPTION

Section 3.01 Notices to Trustee.

Securities of a Series that are redeemable prior to maturity shall be redeemable in accordance with their terms and, unless the Authorizing Resolution or supplemental indenture provides otherwise, in accordance with this Article Three.

If the Company wants to redeem Securities pursuant to Paragraph 4 of the Securities, it shall notify the Trustee in writing of the redemption date and the principal amount of Securities to be redeemed. Any such notice may be cancelled at any time prior to notice of such redemption being sent to Holders. Any such cancelled notice shall be void and of no effect.

If the Company wants to credit any Securities previously redeemed, retired or acquired against any redemption pursuant to Paragraph 5 of the Securities, it shall notify the Trustee of the amount of the credit and it shall deliver any Securities not previously delivered to the Trustee for cancellation with such notice.

The Company shall give each notice provided for in this Section 3.01 at least 15 days before the notice of any such redemption is to be delivered to Holders (unless a shorter notice shall be satisfactory to the Trustee).

Section 3.02 Selection of Securities to be Redeemed.

If fewer than all of the Securities of a Series are to be redeemed, the Securities to be redeemed shall be selected pro rata, by lot, or such other method the Trustee (or depository, as applicable) considers fair and appropriate and, in the case of Global Securities, in a manner that complies with applicable requirements of the Depository. The Trustee (or depository, as applicable) shall make the selection from Securities outstanding not previously called for redemption and shall promptly notify the Company of the serial numbers or other identifying attributes of the Securities so selected. The Trustee (or depository, as applicable) may select for redemption portions of the principal of Securities that have denominations larger than the minimum denomination for the Series. Securities and portions of them it selects shall be in amounts equal to a permissible denomination for the Series. Provisions of this Indenture that apply to Securities called for redemption also apply to portions of Securities called for redemption.

Unless otherwise provided in the Authorizing Resolution or supplemental indenture relating to a Series, if any Security selected for partial redemption is converted into or exchanged for Common Stock or other securities, cash or other property in part before termination of the conversion or exchange right with respect to the portion of the Security so selected, the converted portion of such Security shall be deemed (so far as may be) to be the portion selected for redemption. Securities which have been converted or exchanged during a selection of Securities to be redeemed shall be treated by the Trustee as outstanding for the purpose of such selection.

Section 3.03 Notice of Redemption.

At least 30 days but not more than 60 days before a redemption date, the Company shall mail a notice of redemption by first-class mail, postage prepaid (or in the case of Global Securities, deliver electronically in accordance with the applicable procedures of the Depository), to each Holder of Securities to be redeemed.

The notice shall identify the Securities to be redeemed and shall state:

- (1) the redemption date;
- (2) the redemption price or the formula pursuant to which such price will be calculated;
- (3) if any Security is being redeemed in part, the portion of the principal amount of such Security to be redeemed and that, after the redemption date, upon surrender of such Security, a new Security or Securities in principal amount equal to the unredeemed portion shall be issued upon cancellation of the original Security;

- (4) in the case of Securities of a Series that are convertible or exchangeable into shares of the Company's common stock or other securities, cash or other property, the conversion or exchange price or rate, the date or dates on which the right to convert or exchange the principal of the Securities of such Series to be redeemed will commence or terminate and the place or places where such Securities may be surrendered for conversion or exchange;
- (5) the name and address of the Paying Agent;
- (6) that Securities called for redemption must be surrendered to the Paying Agent to collect the redemption price;
- (7) that interest on Securities called for redemption ceases to accrue on and after the redemption date;
- (8) that the Securities are being redeemed pursuant to the mandatory redemption or the optional redemption provisions, as applicable; and
- (9) the CUSIP number and that no representation is hereby deemed to be made by the Trustee as to the correctness or accuracy of any such CUSIP and/or ISIN or other similar number printed in the notice or on such Securities, and that reliance may be placed only on the other identification numbers printed on such Securities.

At the Company's request, the Trustee shall give the notice of redemption in the Company's name and at its expense; *provided, however*, that the Company shall deliver to the Trustee at least 15 days prior to the date on which notice of redemption is to be sent or such shorter period as may be satisfactory to the Trustee, an Officers' Certificate requesting that the Trustee give such notice and setting forth the information to be stated in such notice as provided in the preceding paragraph.

Section 3.04 Effect of Notice of Redemption.

Once notice of redemption is sent, Securities called for redemption become due and payable on the redemption date and at the redemption price as set forth in the notice of redemption. Upon surrender to the Paying Agent, such Securities shall be paid at the redemption price, *plus* accrued and unpaid interest to the redemption date. Notices of redemption may be subject to one or more conditions. In the event that any such conditions are not satisfied the Company may amend or revoke such notice of redemption by sending notice to Securityholders (with a copy to the Trustee) in accordance with the applicable procedures of the Depository.

Section 3.05 Deposit of Redemption Price.

On or before the redemption date, the Company shall deposit with the Paying Agent immediately available funds in the applicable currency sufficient to pay the redemption price of and accrued interest on all Securities to be redeemed on that date.

Section 3.06 Securities Redeemed in Part.

Upon surrender of a Security that is redeemed in part, the Company shall execute and the Trustee shall authenticate for each Holder a new Security of the same Series equal in principal amount to the unredeemed portion of the Security surrendered.

**ARTICLE FOUR
COVENANTS**

Section 4.01 Payment of Securities.

The Company shall pay the principal of and interest on a Series on the dates, in the currency and in the manner provided in the Securities of the Series. An installment of principal or interest shall be considered paid on the date it is due if the Paying Agent holds on that date money in the applicable currency designated for and sufficient to pay the installment.

The Company shall pay interest on overdue principal at the rate borne by the Series; it shall pay interest on overdue installments of interest at the same rate.

Section 4.02 Maintenance of Office or Agency.

The Company shall maintain the office or agency required under Section 2.03. The Company shall give prior written notice to the Trustee of the location, and any change in the location, of such office or agency. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the address of the Trustee.

Section 4.03 Compliance Certificate.

The Company shall deliver to the Trustee within 120 days after the end of each fiscal year of the Company an Officers' Certificate stating whether or not the signers know of any continuing Default by the Company in performing any of its obligations under this Indenture. If they do know of such a Default, the certificate shall describe the Default. In addition, the Company will notify the Trustee within 5 business days upon the Company's knowledge of a Default.

Section 4.04 Waiver of Stay, Extension or Usury Laws.

The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay or extension law or any usury law or other law that would prohibit or forgive the Company from paying all or any portion of the principal of or interest on the Securities of any Series as contemplated herein, wherever enacted, now or at any time hereafter in force, or which may affect the covenants or the performance of this Indenture; and (to the extent that it may lawfully do so) the Company expressly waives all benefit or advantage of any such law, and covenants that it will not hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

**ARTICLE FIVE
SUCCESSOR CORPORATION**

Section 5.01 Company May Merge, etc.

Nothing contained in this Indenture shall prevent any consolidation or merger of the Company with or into any other Person (whether or not affiliated with the Company) or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance, transfer or other disposition of the property of the Company or its successor or successors as an entirety, or substantially as an entirety, to any other Person (whether or not affiliated with the Company or its successor or successors); provided, however, the Company hereby covenants and agrees that, upon any such consolidation or merger (in each case, if the Company is not the survivor of such transaction) or any such sale, conveyance, transfer or other disposition (other than a sale, conveyance, transfer or other disposition to a Subsidiary of the Company), the due and punctual payment of the principal of (premium, if any) and interest on all of the Securities of all series in accordance with the terms of each series, according to their tenor, and the due and punctual performance and observance of all the covenants and conditions of this Indenture with respect to each series or established with respect to such series pursuant to Section 2.01 to be kept or performed by the Company shall be expressly assumed, by supplemental indenture (which shall conform to the provisions of the Trust Indenture Act, as then in effect) reasonably satisfactory in form to the Trustee executed and delivered to the Trustee by the entity formed by such consolidation, or into which the Company shall have been merged, or by the entity which shall have acquired such property.

Upon any such consolidation, merger, sale, lease, conveyance or other disposition, the Successor will be substituted for the Company under the Indenture. The Successor may then exercise every power and right of the Company under this Indenture, and except in the case of a lease, the Company will be released from all of its liabilities and obligations in respect of the Securities and the Indenture. If the Company leases all or substantially all of its assets the Company will not be released from its obligations to pay the principal of and interest, if any, on the Securities.

ARTICLE SIX DEFAULTS AND REMEDIES

Section 6.01 Events of Default.

An “**Event of Default**” on a Series occurs if, voluntarily or involuntarily, whether by operation of law or otherwise, any of the following occurs:

- (1) the failure by the Company to pay interest on any Security of such Series when the same becomes due and payable and the continuance of any such failure for a period of 30 days;
- (2) the failure by the Company to pay the principal of any Security of such Series when the same becomes due and payable at maturity, upon acceleration, redemption or otherwise;
- (3) the failure by the Company or any Restricted Subsidiary to comply with any of its agreements or covenants in, or provisions of, the Securities of such Series or this Indenture (as they relate thereto) and such failure continues for the period and after the notice specified below (except in the case of a default with respect to Article Five (or any other provision specified in the applicable supplemental indenture or Authorizing Resolution), which will constitute Events of Default with notice but without passage of time);
- (4) default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness (other than Non-Recourse Indebtedness) for money borrowed by the Company or any of its Restricted Subsidiaries (or the payment of which is guaranteed by the Company or any of its Restricted Subsidiaries), whether such Indebtedness or guarantee now exists or is created after the Issue Date, if that default:
 - (A) is caused by a failure to pay at final stated maturity the principal amount of such Indebtedness prior to the expiration of the grace period provided in such Indebtedness on the date of such default (a “Payment Default”); or
 - (B) results in the acceleration of such Indebtedness prior to its express maturity without such Indebtedness having been discharged or such acceleration having been cured, waived, rescinded or annulled for the period and after the notice specified below,

and, in each case, the principal amount of any such Indebtedness, together with the principal amount of any other such Indebtedness under which there has been a Payment Default or the maturity of which has been so accelerated, aggregates \$50 million or more;

- (5) the Company or any Restricted Subsidiary that is a Significant Subsidiary pursuant to or within the meaning of any Bankruptcy Law:
 - (A) commences a voluntary case,
 - (B) consents to the entry of an order for relief against it in an involuntary case,
 - (C) consents to the appointment of a Custodian of it or for all or substantially all of its Property, or
 - (D) makes a general assignment for the benefit of its creditors;
- (6) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:
 - (A) is for relief against the Company or any Restricted Subsidiary that is a Significant Subsidiary as debtor in an involuntary case,
 - (B) appoints a Custodian of the Company or any Restricted Subsidiary that is a Significant Subsidiary or a Custodian for all or substantially all of the Property of the Company, or
 - (C) orders the liquidation of the Company or any Restricted Subsidiary that is a Significant Subsidiary, and the order or decree remains unstayed and in effect for 60 days.

A Default as described in subclause (3) or (4)(B) above will not be deemed an Event of Default until the Trustee notifies the Company, or the Holders of at least 25 percent in principal amount of the then outstanding Securities of the applicable Series notify the Company and the Trustee, of the Default and (except in the case of a default with respect to Article Five (or any other provision specified in the applicable supplemental indenture or Authorizing Resolution)) the Company does not cure the Default within (a) with respect to subclause (3), 60 days after receipt of the notice and (b) with respect to subclause (4)(B), 30 days after receipt of the notice. The notice must specify the Default, demand that it be remedied and state that the notice is a "Notice of Default." If such a Default is cured within such time period, it ceases to exist, without any action by the Trustee or any other Person.

The term "**Custodian**" means any receiver, trustee, assignee, liquidator, custodian or similar official under any Bankruptcy Law.

Section 6.02 Acceleration.

If an Event of Default (other than an Event of Default with respect to the Company resulting from subclause (5) or (6) above), shall have occurred and be continuing under the Indenture, the Trustee by notice to the Company, or the Holders of at least 25 percent in principal amount of the Securities of the applicable Series then outstanding by notice to the Company and the Trustee, may declare all Securities of such Series to be due and payable immediately. Upon such declaration of acceleration, the amounts due and payable on the Securities of such Series will be due and payable immediately. If an Event of Default with respect to the Company specified in subclauses (5) or (6) above occurs, all amounts due and payable on the Securities of such Series will ipso facto become and be immediately due and payable without any declaration, notice or other act on the part of the Trustee and the Company or any Holder.

Holders of a majority in principal amount of the then outstanding Securities of such Series may rescind an acceleration with respect to such Series and its consequence (except an acceleration due to nonpayment of principal or interest) if the rescission would not conflict with any judgment or decree and if all existing Events of Default (other than the non-payment of accelerated principal) have been cured or waived.

No such rescission shall extend to or shall affect any subsequent Event of Default, or shall impair any right or power consequent thereon.

Section 6.03 Other Remedies.

If an Event of Default on a Series occurs and is continuing, the Trustee may pursue any available remedy by proceeding at law or in equity to collect the payment of principal of or interest on the Series or to enforce the performance of any provision in the Securities or this Indenture applicable to the Series.

The Trustee may maintain a proceeding even if it does not possess any of the Securities or does not produce any of them in the proceeding. A delay or omission by the Trustee or any Securityholder in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of or acquiescence in the Event of Default. No remedy is exclusive of any other remedy. All available remedies are cumulative.

Section 6.04 Waiver of Existing Defaults.

Subject to Section 10.02, the Holders of a majority in principal amount of the outstanding Securities of a Series on behalf of all the Holders of the Series by written notice to the Trustee may waive an existing Default on such Series and its consequences. When a Default is waived, it is cured and stops continuing, and any Event of Default arising therefrom shall be deemed to have been cured; but no such waiver shall extend to any subsequent or other Default or impair any right consequent thereon.

Section 6.05 Control by Majority.

The Holders of a majority in principal amount of the outstanding Securities of a Series may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on it with respect to such Series. The Trustee, however, may refuse to follow any direction (i) that conflicts with law or this Indenture, (ii) that, subject to Section 7.01, the Trustee determines is unduly prejudicial to the rights of other Securityholders, (iii) that would involve the Trustee in personal liability, or (iv) if the Trustee shall not have been provided with indemnity satisfactory to it.

Section 6.06 Limitation on Suits.

A Securityholder of a Series may not pursue any remedy with respect to this Indenture or the Series unless:

- (1) the Holder gives to the Trustee written notice of a continuing Event of Default on the Series;
- (2) the Holders of at least a majority in principal amount of the outstanding Securities of the Series make a written request to the Trustee to pursue the remedy;
- (3) such Holder or Holders offer to the Trustee indemnity satisfactory to the Trustee against any loss, liability or expense;
- (4) the Trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- (5) no written request inconsistent with such written request shall have been given to the Trustee pursuant to this Section 6.06.

A Securityholder may not use this Indenture to prejudice the rights of another Holder of Securities of the same Series or to obtain a preference or priority over another Holder of Securities of the same Series (it being understood that the Trustee does not have an affirmative duty to ascertain whether or not such actions or forbearances by such Holder are unduly prejudicial to another Holder).

Section 6.07 Rights of Holders to Receive Payment.

Notwithstanding any other provision of this Indenture, the right of any Holder to receive payment of principal of and interest on any Security, on or after the respective due dates expressed in the Security, or to bring suit for the enforcement of any such payment on or after such respective dates, is absolute and unconditional and shall not be impaired or affected without the consent of the Holder.

Section 6.08 Collection Suit by Trustee.

If an Event of Default in payment of interest or principal specified in Section 6.01(1) or (2) occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Company for the whole amount of principal and interest remaining unpaid.

Section 6.09 Trustee May File Proofs of Claim.

The Trustee may file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements, and advances of the Trustee, its agents and counsel) and the Securityholders allowed in any judicial proceedings relative to the Company or its creditors or Property, and unless prohibited by applicable law or regulation, may vote on behalf of the Holders in any election of a Custodian, and shall be entitled and empowered to collect and receive any moneys or other Property payable or deliverable on any such claims and to distribute the same and any Custodian in any such judicial proceeding is hereby authorized by each Securityholder to make such payments to the Trustee. Nothing herein shall be deemed to authorize the Trustee to authorize or consent to or vote for or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder or to authorize the Trustee to vote in respect of the claim of any Securityholder except as aforesaid for the election of the Custodian.

Section 6.10 Priorities.

If the Trustee collects any money pursuant to this Article with respect to Securities of any Series, it shall pay out the money in the following order:

First: to the Trustee for amounts due under Section 7.07;

Second: to Securityholders of the Series for amounts due and unpaid on the Series for principal and interest, ratably, without preference or priority of any kind, according to the amounts due and payable on the Series for principal and interest, respectively; and

Third: to the Company or as a court of competent jurisdiction shall direct.

The Trustee may fix a record date and payment date for any payment to Securityholders pursuant to this Section 6.10.

Section 6.11 Undertaking for Costs.

In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as Trustee, a court in its discretion may require the filing by any party litigant in the suit of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees and expenses, against any party litigant in the suit, having the due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section does not apply to a suit by the Trustee, a suit by a Holder pursuant to Section 6.07 or a suit by Holders of more than 10% in principal amount of the Series.

**ARTICLE SEVEN
TRUSTEE**

Section 7.01 Duties of Trustee.

- (a) If an Event of Default has occurred and is continuing with respect to Securities of any Series, the Trustee shall exercise its rights and powers and use the same degree of care and skill in their exercise as a prudent man would exercise or use under the circumstances in the conduct of his own affairs.
- (b) Except during the continuance of an Event of Default:
- (1) The Trustee need perform only those duties that are specifically set forth in this Indenture and no others and no implied covenants or obligations shall be read into this Indenture against the Trustee.
 - (2) In the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture. The Trustee, however, in the case of certificates or opinions specifically required by any provision hereof to be furnished to it, shall examine the certificates and opinions to determine whether or not they conform to the requirements of this Indenture but need not confirm or investigate the accuracy of mathematical calculations or other facts or matters stated therein.
- (c) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:
- (1) This paragraph does not limit the effect of paragraph (b) of this Section.
 - (2) The Trustee shall not be liable for any error of judgment made in good faith by a Trust Officer, unless it is proved that the Trustee was negligent in ascertaining the pertinent facts.
 - (3) The Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 6.05 or any other direction of the Holders permitted hereunder.
- (d) Every provision of this Indenture that in any way relates to the Trustee is subject to paragraphs (a), (b) and (c) of this Section.
- (e) The Trustee may refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against any loss, liability or expense.
- (f) The Trustee shall not be liable for interest on any money received by it except as the Trustee may agree with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.
- (g) None of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if there shall be reasonable grounds for believing that the repayment of such funds or adequate indemnity against such liability is not reasonably assured to it.

Section 7.02 Rights of Trustee.

Subject to Section 7.01:

- (a) The Trustee may conclusively rely and shall be fully protected in acting or refraining from acting on any document, resolution, certificate, instrument, report, or direction believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document, resolution, certificate, instrument, report, or direction.

- (b) Before the Trustee acts or refrains from acting, it may require an Officers' Certificate or an Opinion of Counsel or both, which shall conform to Sections 12.04 and 12.05 hereof and containing such other statements as the Trustee reasonably deems necessary to perform its duties hereunder. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on the Officers' Certificate, Opinion of Counsel or any other direction of the Company permitted hereunder.
- (c) The Trustee may act through agents and shall not be responsible for the misconduct or negligence of any agent appointed with due care.
- (d) The Trustee shall not be liable for any action taken, suffered or omitted by it in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon it by this Indenture.
- (e) The Trustee may consult with counsel of its selection, and the advice of such counsel or any Opinion of Counsel as to matters of law shall be full and complete authorization and protection in respect of any action taken, omitted or suffered by it hereunder in good faith and in accordance with the advice or opinion of such counsel.
- (f) Unless otherwise specifically provided in the Indenture, any demand, request, direction or notice from the Company shall be sufficient if signed by an Officer of the Company.
- (g) For all purposes under this Indenture, the Trustee shall not be deemed to have notice or knowledge of any Event of Default unless written notice of any Event of Default is received by the Trustee at its address specified in Section 12.02 hereof and such notice references the Securities generally, the Company and this Indenture.
- (h) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders pursuant to this Indenture, unless such Holders shall have offered to the Trustee security or indemnity reasonably satisfactory to the Trustee against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.
- (i) The Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Company, personally or by agent or attorney at the sole cost of the Company and shall incur no liability or additional liability of any kind by reason of such inquiry or investigation.
- (j) In no event shall the Trustee be responsible or liable for special, indirect, punitive or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action.
- (k) The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and each agent, custodian and other Person employed to act hereunder.
- (l) The Trustee may request that the Company deliver a certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture.
- (m) In no event shall the Trustee be responsible or liable for any failure or delay in the performance of its obligations hereunder arising out of or caused by, directly or indirectly, forces beyond its control, including, without limitation, strikes, work stoppages, accidents, acts of war or terrorism, civil or military disturbances, nuclear or natural catastrophes or acts of God, and interruptions, loss or malfunctions of utilities, communications or computer (software and hardware) services; it being understood that the Trustee shall use reasonable efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

Section 7.03 Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Securities and may otherwise deal with the Company or its affiliates with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights. The Trustee, however, must comply with Sections 7.10 and 7.11.

Section 7.04 Trustee's Disclaimer.

The Trustee makes no representation as to the validity or adequacy of this Indenture, the Securities or of any prospectus used to sell the Securities of any Series; it shall not be accountable for the Company's use of the proceeds from the Securities; it shall not be accountable for any money paid to the Company, or upon the Company's direction, if made under and in accordance with any provision of this Indenture; it shall not be responsible for the use or application of any money received by any Paying Agent other than the Trustee; and it shall not be responsible for any statement of the Company in this Indenture or in the Securities other than its certificate of authentication.

Section 7.05 Notice of Defaults.

If a Default on a Series occurs and is continuing and if a responsible officer of the Trustee has actual knowledge of such Default, the Trustee shall deliver to each Securityholder of the Series notice of the Default (which shall specify any uncured Default known to it) within 90 days after the Trustee obtains such knowledge. Except in the case of a default in payment of principal of or interest on a Series, the Trustee may withhold the notice if and so long as the board of directors of the Trustee, the executive or any trust committee of such directors and/or responsible officers of the Trustee in good faith determine(s) that withholding the notice is in the interests of Holders of the Series.

Section 7.06 Reports by Trustee to Holders.

Within 60 days after each May 15 beginning with the May 15 following the date of this Base Indenture, the Trustee shall mail to each Securityholder a brief report dated as of such May 15 that complies with TIA § 313(a) (but if no event described in TIA § 313(1) through (8) has occurred within the twelve months preceding the reporting date no report in relation thereto need be transmitted). The Trustee also shall comply with TIA § 313(b).

A copy of each report at the time of its mailing to Securityholders shall be delivered to the Company and filed by the Trustee with the SEC and each national securities exchange on which the Securities are listed. The Company agrees to notify the Trustee of each national securities exchange on which the Securities are listed.

Section 7.07 Compensation and Indemnity.

The Company shall pay to the Trustee from time to time reasonable compensation for its services subject to any written agreement between the Trustee and the Company (which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust). The Company shall reimburse the Trustee upon request for all reasonable out-of-pocket expenses incurred by it. Such expenses shall include the reasonable compensation and expenses of the Trustee's agents and counsel. The Company shall indemnify the Trustee, its officers, directors, employees and agents and hold it harmless against any loss, liability, claim, damage or expense incurred or made by or on behalf of it in connection with the administration of this Indenture or the trust hereunder and its duties hereunder including the costs and expenses of defending itself against or investigating any claim in the premises. The Trustee shall notify the Company promptly of any claim of which it has received written notice and for which it may seek indemnity. The Company need not reimburse any expense or indemnify against any loss or liability incurred by the Trustee through the Trustee's, or its officers', directors', or employees' negligence or willful misconduct.

Unless otherwise provided in any supplemental indenture or Authorizing Resolution relating to any Series, to ensure the Company's payment obligations in this Section, the Trustee shall have a lien prior to the Securities of all Series on all money or Property held or collected by the Trustee, except that held in trust to pay principal of or interest on particular Securities. When the Trustee incurs expenses or renders services in connection with an Event of Default specified in Section 6.01 or in connection with Article Six hereof, the expenses (including the reasonable fees and expenses of its counsel) and the compensation for services in connection therewith are to constitute expenses of administration under any Bankruptcy Law. Section 7.07 shall survive the discharge of the Indenture or resignation or removal of Trustee.

Section 7.08 Replacement of Trustee.

The Trustee may resign with respect to Securities of any or all Series by so notifying the Company. The Holders of a majority in principal amount of the outstanding Securities (or of the relevant Series) may remove the Trustee by so notifying the removed Trustee in writing (at any time when the Trustee holds funds on behalf of the Company, upon 30 days' prior written notice) and may appoint a successor trustee with the Company's consent. Such resignation or removal shall not take effect until the appointment by the Securityholders of the relevant Series or the Company as hereinafter provided of a successor trustee and the acceptance of such appointment by such successor trustee. The Company (at any time when the Trustee holds funds on behalf of the Company, upon 30 days' prior written notice) may remove the Trustee and any Securityholder may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee for any or no reason, including if:

- (1) the Trustee fails to comply with Section 7.10 after written request by the Company or any bona fide Securityholder who has been a Securityholder for at least six months;
- (2) the Trustee is adjudged a bankrupt or an insolvent;
- (3) a receiver or other public officer takes charge of the Trustee or its Property; or
- (4) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint a successor trustee with respect to the Securities of the relevant Series. If a successor trustee does not take office within 30 days after the retiring Trustee resigns or is removed, the retiring Trustee at the expense of the Company, the Company or any Holder may petition any court of competent jurisdiction for the appointment of a successor trustee.

A successor trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Immediately after that, the retiring Trustee shall, upon payment of its fees and expenses (including, without limitation, reasonable fees and expenses of counsel) hereunder, transfer all Property held by it as Trustee to the successor trustee, the resignation or removal of the retiring Trustee shall become effective, and the successor trustee shall have all the rights, powers and duties of the Trustee under this Indenture. A successor trustee shall mail notice of its succession to each Securityholder.

Section 7.09 Successor Trustee by Merger, etc.

If the Trustee consolidates with, merges with or into or converts into, or transfers all or substantially all of its corporate trust business to, another corporation, the successor corporation without any further act shall be the successor trustee.

Section 7.10 Eligibility; Disqualification.

This Indenture shall always have a Trustee who satisfies the requirements of TIA § 310(a)(1). The Trustee shall have a combined capital and surplus of at least \$10,000,000 as set forth in its most recent published annual report of condition. The Trustee shall comply with TIA § 310(b).

Section 7.11 Preferential Collection of Claims Against Company.

The Trustee shall comply with TIA § 311(a), excluding any creditor relationship listed in TIA § 311(b). A Trustee who has resigned or been removed shall be subject to TIA § 311(a) to the extent indicated therein.

**ARTICLE EIGHT
DISCHARGE OF INDENTURE**

Section 8.01 Defeasance upon Deposit of Moneys or Government Obligations.

(a) The Company may, at its option and at any time, elect to have either paragraph (b) or paragraph (c) below be applied to the outstanding Securities of any Series upon compliance with the applicable conditions set forth in paragraph (d).

(b) Upon the Company's exercise under paragraph (a) of the option applicable to this paragraph (b) with respect to any Series, the Company shall be deemed to have been released and discharged from its obligations with respect to the outstanding Securities of the Series on the date the applicable conditions set forth below are satisfied (hereinafter, "**Legal Defeasance**"). For this purpose, such Legal Defeasance means that the Company shall be deemed to have paid and discharged the entire Indebtedness represented by the outstanding Securities of a Series, which shall thereafter be deemed to be "outstanding" only for the purposes of the Sections and matters under this Indenture referred to in (i) and (ii) below, and the Company shall be deemed to have satisfied all its other obligations under such Securities and this Indenture insofar as such Securities are concerned, except for the following which shall survive until otherwise terminated or discharged hereunder: (i) the rights of Holders of outstanding Securities of a Series to receive solely from the trust fund described in paragraph (d), below and as more fully set forth in such paragraph, payments in respect of the principal of and interest on such Securities when such payments are due and (ii) obligations listed in Section 8.02, subject to compliance with this Section 8.01. The Company may exercise its option under this paragraph (b) with respect to a Series notwithstanding the prior exercise of its option under paragraph (c) below with respect to the Securities of the Series.

(c) Upon the Company's exercise under paragraph (a) of the option applicable to this paragraph (c) with respect to a Series, the Company shall be released and discharged from the obligations under any covenant contained in Articles Four and Five and any other covenant contained in or referenced in the Authorizing Resolution or supplemental indenture relating to such Series (to the extent such release and discharge shall not be prohibited thereby), on and after the date the conditions set forth below are satisfied (hereinafter, "**Covenant Defeasance**"), and the Securities of such Series shall thereafter be deemed to be not "outstanding" for the purpose of any direction, waiver, consent or declaration or act of Holders (and the consequences of any thereof) in connection with such covenants, but shall continue to be deemed "outstanding" for all other purposes hereunder. For this purpose, such Covenant Defeasance means that, with respect to the outstanding Securities of a Series, the Company may omit to comply with and shall have no liability in respect of any term, condition or limitation set forth in any such covenant, whether directly or indirectly, by reason of any reference elsewhere herein to any such covenant or by reason of any reference in any such covenant to any other provision herein or in any other document and such omission to comply shall not constitute a Default or an Event of Default under Section 6.01(3) or otherwise, but, except as specified above, the remainder of this Indenture and such Securities shall be unaffected thereby.

(d) The following shall be the conditions to application of either paragraph (b) or paragraph (c) above to the outstanding Securities of the applicable Series:

- (1) The Company shall have irrevocably deposited in trust with the Trustee (or another qualifying trustee), money in the currency in which the Securities of such Series are payable or Government Obligations or a combination thereof in such amounts and at such times as are sufficient, in the opinion of a nationally recognized firm of independent public accountants, to pay the principal of and interest on the outstanding Securities of such Series to maturity or redemption; *provided, however*, that the Trustee (or other qualifying trustee) shall have received an irrevocable written order from the Company instructing the Trustee (or other qualifying trustee) to apply such money or the proceeds of such Government Obligations to said payments with respect to the Securities of such Series to maturity or redemption;
- (2) No Default or Event of Default (other than a Default or Event of Default resulting from non-compliance with any covenant from which the Company is released upon effectiveness of such Legal Defeasance or Covenant Defeasance pursuant to paragraph (b) or (c) hereof, as applicable) shall have occurred and be continuing on the date of such deposit or result therefrom;
- (3) Such deposit will not result in a breach or violation of, or constitute a default under, any other material instrument or agreement to which the Company or any of any of its Restricted Subsidiaries is a party or by which it or any of their Property is bound;
- (4) (i) In the event the Company elects paragraph (b) hereof, the Company shall deliver to the Trustee an Opinion of Counsel in the United States, in form and substance reasonably satisfactory to the Trustee, to the effect that (A) the Company has received from, or there has been published by, the Internal Revenue Service a ruling or (B) since the Issue Date pertaining to such Series, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such Opinion of Counsel shall state that, or (ii) in the event the Company elects paragraph (c) hereof, the Company shall deliver to the Trustee an Opinion of Counsel in the United States, in form and substance reasonably satisfactory to the Trustee, to the effect that, in the case of clauses (i) and (ii), and subject to customary assumptions and exclusions, Holders of the Securities of such Series will not recognize income, gain or loss for federal income tax purposes as a result of such deposit and the defeasance contemplated hereby and will be subject to federal income tax in the same amounts and in the same manner and at the same times as would have been the case if such deposit and defeasance had not occurred;
- (5) The Company shall have delivered to the Trustee an Officers' Certificate, stating that the deposit under clause (1) was not made by the Company with the intent of preferring the Holders of the Securities of such Series over any other creditors of the Company or with the intent of defeating, hindering, delaying or defrauding any other creditors of the Company or others; and
- (6) The Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent specified herein relating to the defeasance contemplated by this Section 8.01 have been complied with.

In the event all or any portion of the Securities of a Series are to be redeemed through such irrevocable trust, the Company must make arrangements satisfactory to the Trustee, at the time of such deposit, for the giving of the notice of such redemption or redemptions by the Trustee in the name and at the expense of the Company.

(e) In addition to the Company's rights above under this Section 8.01, the Company may terminate all of its obligations under this Indenture with respect to a Series, when:

- (1) All Securities of such Series theretofore authenticated and delivered (other than Securities which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 2.07 and Securities for whose payment money has theretofore been deposited in trust or segregated and held in trust by the Company and thereafter repaid to the Company or discharged from such trust) have been delivered to the Trustee for cancellation or all such Securities not theretofore delivered to the Trustee for cancellation (A) have become due and payable, (B) will become due and payable at maturity within one year or (C) are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of the Company, and in each such case, the Company has irrevocably deposited or caused to be deposited with the Trustee (or another qualifying trustee) as trust funds in trust solely for that purpose an amount of money in the currency in which the Securities of such Series are payable or Government Obligations or a combination thereof sufficient, in the opinion of a nationally recognized firm of independent public accountants, to pay and discharge the entire Indebtedness on the Securities of such Series not theretofore delivered to the Trustee for cancellation, for principal of and interest on the Securities of such Series, on the date of such deposit or to the maturity or redemption date, as the case may be;

- (2) The Company has paid or caused to be paid all other sums payable hereunder by the Company;
- (3) The Company has delivered irrevocable instructions to the Trustee (or such other qualifying trustee), to apply the deposited money toward the payment of the Securities of such Series at maturity or redemption, as the case may be; and
- (4) The Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, stating that all conditions precedent specified in this Section 8.01(e) relating to the satisfaction and discharge of this Indenture have been complied with.

Section 8.02 Survival of the Company's Obligations.

Notwithstanding the satisfaction and discharge of this Indenture under Section 8.01, the Company's obligations in Paragraph 8 of the Securities and Sections 2.03 through 2.07, 4.01, 7.07, 7.08, 8.04 and 8.05, however, shall survive until the Securities of an applicable Series are no longer outstanding. Thereafter, the Company's obligations in Paragraph 8 of the Securities of such Series and Sections 7.02, 7.07, 8.04 and 8.05 shall survive (as they relate to such Series) such satisfaction and discharge.

Section 8.03 Application of Trust Money.

The Trustee shall hold in trust money or Government Obligations deposited with it pursuant to Section 8.01. It shall apply the deposited money and the money from Government Obligations in accordance with this Indenture to the payment of principal of and interest on the Securities of the defeased Series.

Section 8.04 Repayment to the Company.

The Trustee and the Paying Agent shall promptly pay to the Company upon request any excess money or securities held by them at any time. The Trustee and the Paying Agent shall pay to the Company upon request any money held by them for the payment of principal or interest that remains unclaimed for two years, *provided, however*, that the Trustee or such Paying Agent, before being required to make any such repayment, may at the expense of the Company cause to be published once in a newspaper of general circulation in the City of New York or send to each such Holder notice that such money remains unclaimed and that, after a date specified therein, which shall not be less than 30 days from the date of such publication or mailing, any unclaimed balance of such money then remaining will be repaid to the Company. After payment to the Company, Securityholders entitled to the money must look to the Company for payment as general creditors unless applicable abandoned property law designates another person and all liability of the Trustee or such Paying Agent with respect to such money shall cease.

Section 8.05 Reinstatement.

If the Trustee is unable to apply any money or Government Obligations in accordance with Section 8.01 by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the Company's obligations under this Indenture and the Securities relating to the Series shall be revived and reinstated as though no deposit had occurred pursuant to Section 8.01 until such time as the Trustee is permitted to apply all such money or Government Obligations in accordance with Section 8.01; *provided, however*, that (a) if the Company has made any payment of interest on or principal of any Securities of the Series because of the reinstatement of its obligations hereunder, the Company shall be subrogated to the rights of the Holders of such Securities to receive such payment from the money or Government Obligations held by the Trustee and (b) unless otherwise required by any legal proceeding or any order or judgment of any court or governmental authority, the Trustee shall return all such money or Government Obligations to the Company promptly after receiving a written request therefor at any time, if such reinstatement of the Company's obligations has occurred and continues to be in effect.

**ARTICLE NINE
RESERVED**

**ARTICLE TEN
AMENDMENTS, SUPPLEMENTS AND WAIVERS**

Section 10.01 Without Consent of Holders.

The Company and the Trustee may amend or supplement this Indenture or the Securities of a Series without notice to or consent of any Securityholder of such Series:

- (1) to cure any ambiguity, omission, defect or inconsistency;
- (2) to comply with Article Five;
- (3) to provide that specific provisions of this Indenture shall not apply to a Series not previously issued or to make a change to specific provisions of this Indenture that only applies to any Series not previously issued or to additional Securities of a Series not previously issued;
- (4) to create a Series and establish its terms;
- (5) to provide for uncertificated Securities in addition to or in place of certificated Securities;
- (6) to release a guarantor in respect of any Series which, in accordance with the terms of this Indenture applicable to the particular Series, ceases to be liable in respect of its guarantee;
- (7) to add a guarantor in respect of any Series;
- (8) to secure any Series;
- (9) to comply with requirements of the SEC in order to effect or maintain the qualification of this Indenture under the TIA;
- (10) to make any other change that does not adversely affect the rights of Securityholders; and
- (11) to conform the provisions of the Indenture to the final offering memorandum in respect of any Series.

After an amendment under this Section 10.01 becomes effective, the Company shall deliver notice of such amendment to the Securityholders.

Section 10.02 With Consent of Holders.

The Company and the Trustee may amend or supplement this Indenture or the Securities of a Series without notice to any Securityholder of such Series but with the written consent of the Holders of at least a majority in principal amount of the outstanding Securities of each Series affected by the amendment (including consents obtained in connection with a purchase of, or tender offer or exchange offer for, Securities of such Series). Each such Series shall vote as a separate class. The Holders of a majority in principal amount of the outstanding Securities of any Series may waive compliance by the Company with any provision of the Securities of such Series or of this Indenture relating to such Series without notice to any Securityholder (including any waiver granted in connection with a purchase of, or tender offer or exchange offer for, Securities of such Series). Without the consent of each Holder of a Security affected thereby, however, an amendment, supplement or waiver, including a waiver pursuant to Section 6.04, may not:

- (1) reduce the amount of Securities of the relevant Series whose Holders must consent to an amendment, supplement or waiver;
- (2) reduce the rate of or extend the time for payment of interest, including defaulted interest, on any Security;
- (3) reduce the principal of or extend the fixed maturity of any Security or alter the provisions (including related definitions) with respect to redemption of any Security pursuant to Article Three hereof or with respect to any obligations on the part of the Company to offer to purchase or to redeem Securities of a Series pursuant to the Authorizing Resolution or supplemental indenture pertaining to such Series (it being understood that only the consent of the Holders of a majority of the principal amount of the applicable Series of Securities will be required in connection with the waiver or modification of any obligation by the Company to make an offer to purchase the Securities of such Series as a result of a change of control prior to the occurrence of a change of control);
- (4) make any change that adversely affects any right of a Holder to convert or exchange any Security into or for shares of the Company's common stock or other securities, cash or other property in accordance with the terms of such Security;
- (5) modify the ranking or priority of the Securities of the relevant Series or any guarantee thereof;
- (6) release any guarantor of any Series from any of its obligations under its guarantee or this Indenture otherwise than in accordance with the terms of this Indenture;
- (7) make any change in Sections 6.04, 6.07 or this Section 10.02;
- (8) waive a continuing Default or Event of Default in the payment of the principal of or interest on any Security; or
- (9) make any Security payable at a place or in money other than that stated in the Security, or impair the right of any Securityholder to bring suit as permitted by Section 6.07.

An amendment of a provision included solely for the benefit of one or more Series does not affect the interests of Securityholders of any other Series.

It shall not be necessary for the consent of the Holders under this Section to approve the particular form of any proposed supplement, but it shall be sufficient if such consent approves the substance thereof.

Section 10.03 Compliance with Trust Indenture Act.

Every amendment to or supplement of this Indenture or any Securities shall comply with the TIA as then in effect.

Section 10.04 Revocation and Effect of Consents.

A consent to an amendment, supplement or waiver by a Holder shall bind the Holder and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security, even if notation of the consent is not made on any Security. Unless otherwise provided in the consent or the consent solicitation statement or other document describing the terms of the consent, any Holder or subsequent Holder may revoke the consent as to its Security or portion of a Security. Any revocation of a consent by the Holder of a Security or any such subsequent Holder shall be effective only if the Trustee receives the notice of revocation before the date on which the Trustee receives an Officers' Certificate from the Company certifying that the requisite number of consents have been received.

The Company may, but shall not be obligated to, fix a record date for the purpose of determining the Holders of Securities of any Series entitled to consent to any amendment, supplement or waiver, which record date shall be at least 10 days prior to the first solicitation of such consent. If a record date is fixed, and if Holders otherwise have a right to revoke their consent under the consent or the consent solicitation statement or other document describing the terms of the consent, then notwithstanding the second to last sentence of the immediately preceding paragraph, those Persons who were Holders at such record date (or their duly designated proxies), and only those Persons, shall be entitled to revoke any consent previously given, whether or not such Persons continue to be Holders after such record date. No such consent shall be valid or effective for more than 90 days after such record date.

An amendment, supplement or waiver with respect to a Series becomes effective upon the (i) receipt by the Company or the Trustee of the requisite consents, (ii) satisfaction of any conditions to effectiveness as set forth in this Indenture or any indenture supplemental hereto containing such amendment, supplement or waiver and (iii) execution of such amendment, supplement or waiver (or the related supplemental indenture) by the Company and the Trustee. After an amendment, supplement or waiver with respect to a Series becomes effective, it shall bind every Holder of such Series, unless it makes a change described in any of clauses (1) through (9) of Section 10.02, in which case, the amendment, supplement or waiver shall bind a Holder of a Security who is affected thereby only if it has consented to such amendment, supplement or waiver and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security; *provided* that no such waiver shall impair or affect the right of any Holder to receive payment of principal of and interest on a Security, on or after the respective due dates expressed in such Security, or to bring suit for the enforcement of any such payment on or after such respective dates without the consent of such Holder.

Section 10.05 Notation on or Exchange of Securities.

If an amendment, supplement or waiver changes the terms of a Security, the Company may require the Holder of the Security to deliver it to the Trustee, at which time the Trustee shall place an appropriate notation on the Security about the changed terms and return it to the Holder. Alternatively, if the Company or the Trustee so determines, the Company in exchange for the Security shall issue and the Trustee shall authenticate a new Security that reflects the changed terms.

Section 10.06 Trustee to Sign Amendments, etc.

Subject to Section 7.02(b), the Trustee shall sign any amendment, supplement or waiver authorized pursuant to this Article if the amendment, supplement or waiver does not adversely affect the rights, duties, liabilities or immunities of the Trustee. If it does, the Trustee may but need not sign it. In signing or refusing to sign such amendment or supplemental indenture, the Trustee shall be provided with and shall be fully protected in relying upon, an Officers' Certificate and an Opinion of Counsel as conclusive evidence that such amendment, supplement or waiver is authorized or permitted by this Indenture, and (solely with respect to such Opinion of Counsel) that it will be valid and binding upon the Company and enforceable in accordance with its terms.

ARTICLE ELEVEN SECURITIES IN FOREIGN CURRENCIES

Section 11.01 Applicability of Article.

Whenever this Indenture provides for (i) any action by, or the determination of any of the rights of, Holders of Securities of any Series in which not all of such Securities are denominated in the same currency, or (ii) any distribution to Holders of Securities, in the absence of any provision to the contrary pursuant to this Indenture or the Securities of any particular Series, any amount in respect of any Security denominated in a Foreign Currency shall be treated for any such action or distribution as that amount of Dollars that could be obtained for such amount on such reasonable basis of exchange and as of the record date with respect to Securities of such Series (if any) for such action, determination of rights or distribution (or, if there shall be no applicable record date, such other date reasonably proximate to the date of such action, determination of rights or distribution) as the Company may specify in a written notice to the Trustee or, in the absence of such written notice, as the Trustee may determine.

**ARTICLE TWELVE
MISCELLANEOUS**

Section 12.01 Trust Indenture Act Controls.

If any provision of this Indenture limits, qualifies or conflicts with another provision which is required to be included in this Indenture by the TIA, the required provision shall control.

Section 12.02 Notices.

Any order, consent, notice or communication shall be sufficiently given if in writing and delivered in person or mailed by first class mail, postage prepaid, or delivered by commercial courier service, addressed as follows:

if to the Company:
Atossa Therapeutics, Inc.
107 Spring Street
Seattle, Washington 98104
Telephone: (206) 588-0256
Attention: Senior Vice President, Finance & Accounting

if to the Trustee:
[]
[]
[]

The Company or the Trustee by notice to the other may designate additional or different addresses for subsequent notices or communications.

Any notice or communication mailed to a Securityholder shall be mailed to him by first class mail, or delivered by commercial courier service, at his address as it appears on the registration books of the Registrar, or, in the case of Global Securities sent electronically in accordance with the procedures of the Depository, and shall be sufficiently given to him if so sent within the time prescribed.

Failure to send a notice or communication to a Securityholder or any defect in it shall not affect its sufficiency with respect to other Securityholders. If a notice or communication is sent in the manner provided above, it is duly given, whether or not the addressee receives it except that notice to the Trustee shall only be effective upon receipt thereof by the Trustee.

If the Company sends notice or communications to the Securityholders, it shall send a copy to the Trustee at the same time.

In addition to the foregoing, the Trustee agrees to accept and act upon notice, instructions or directions pursuant to this Indenture sent by unsecured e-mail, facsimile transmission or other similar unsecured electronic methods. If the party elects to give the Trustee e-mail or facsimile instructions (or instructions by a similar electronic method) and the Trustee in its discretion elects to act upon such instructions, the Trustee's understanding of such instructions shall be deemed controlling. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee's reliance upon and compliance with such instructions notwithstanding such instructions conflict or are inconsistent with a subsequent written instruction. The party providing electronic instructions agrees to assume all risks arising out of the use of such electronic methods to submit instructions and directions to the Trustee, including without limitation the risk of the Trustee acting on unauthorized instructions, and the risk of interception and misuse by third parties.

Notwithstanding any other provision of this Indenture or any Security, where this Indenture or any Security provides for notice of any event to a Holder of a Global Security (whether by mail or otherwise), such notice shall be sufficiently given if given to the Depositary (or its designee) pursuant to the standing instructions from the Depositary or its designee.

Section 12.03 Communications by Holders with Other Holders.

Securityholders may communicate pursuant to TIA § 312(b) with other Securityholders with respect to their rights under this Indenture or the Securities.

The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA § 312(c).

Section 12.04 Certificate and Opinion as to Conditions Precedent.

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

- (1) an Officers' Certificate (which shall include the statements set forth in Section 12.05) stating that, in the opinion of the signers (who may rely upon an Opinion of Counsel with respect to matters of law), all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and
- (2) an Opinion of Counsel (which shall include the statements set forth in Section 12.05) stating that, in the opinion of such counsel (who may rely upon an Officers' Certificate or certificates of public officials as to matters of fact), all such conditions precedent and covenants, compliance with which constitutes a condition precedent, if any, provided for in this Indenture relating to the proposed action or inaction, have been complied with.

Section 12.05 Statements Required in Certificate or Opinion.

Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture shall include:

- (1) a statement that the person making such certificate or opinion has read such covenant or condition;
- (2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;
- (3) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and
- (4) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

Section 12.06 Rules by Trustee and Agents.

The Trustee may make reasonable rules for action by or a meeting of Securityholders. The Registrar or Paying Agent may make reasonable rules for its functions.

Section 12.07 Legal Holidays.

A “**Legal Holiday**” is a Saturday, a Sunday, a legal holiday or a day on which banking institutions in New York, New York or in the place of payment are not required to be open. If a payment date is a Legal Holiday, payment may be made on the next succeeding day that is not a Legal Holiday, and no interest shall accrue for the intervening period. If this Indenture provides for a time period that ends or requires performance of any non-payment obligation by a day that is not a Business Day, then such time period shall instead be deemed to end on, and such obligation shall instead be performed by, the next succeeding Business Day. A “**Business Day**” is any day other than a Legal Holiday.

Section 12.08 Governing Law.

The laws of the State of New York shall govern this Indenture and the Securities of each Series.

Section 12.09 No Adverse Interpretation of Other Agreements.

This Indenture may not be used to interpret another indenture, loan or debt agreement of the Company or a Subsidiary. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

Section 12.10 No Recourse Against Others.

All liability described in Paragraph 12 of the Securities of any director, officer, employee or stockholder, as such, of the Company is, to the fullest extent permitted by applicable law, waived and released.

Section 12.11 Successors and Assigns.

All covenants and agreements of the Company in this Indenture and the Securities shall bind its successors and assigns. All agreements of the Trustee in this Indenture shall bind its successors and assigns.

Section 12.12 Duplicate Originals.

The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

Signatures of the parties hereto transmitted by facsimile or other electronic transmission shall be deemed to be their original signatures for all purposes.

Section 12.13 Severability.

In case any one or more of the provisions contained in this Indenture or in the Securities of a Series shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Indenture or of such Securities.

Section 12.14 Waiver of Jury Trial.

EACH OF THE COMPANY AND THE TRUSTEE (AND EACH HOLDER BY ITS ACCEPTANCE OF ANY NOTE) HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS INDENTURE, THE SECURITIES OR THE TRANSACTION CONTEMPLATED HEREBY.

SIGNATURES

IN WITNESS WHEREOF, the parties have caused this Indenture to be duly executed, all as of the date first above written.

ATOSSA THERAPEUTICS, INC.

By:

Name:

Title:

[]

By:

Name:

Title:

EXHIBIT A

CUSIP/ISIN No.:

No. _____

[Title of Security]

ATOSSA THERAPEUTICS, INC.
a Delaware corporation

promises to pay to _____ or registered assigns the principal
sum of

_____ [Dollars]* on _____.

Interest Payment Dates: _____ and _____

Record Dates: _____ and _____

Authenticated: _____ Dated: _____

ATOSSA THERAPEUTICS, INC.

By: _____
Name
:
Title:

[_____] ,
as Trustee, certifies that this is one of the Securities
referred to in the within mentioned Indenture.

By: _____
Authorized Signatory

* Or other currency. Insert corresponding provisions on reverse side of Security in respect of foreign currency denomination or interest
payment requirement.

ATOSSA THERAPEUTICS, INC.

[Title of Security]

ATOSSA THERAPEUTICS, INC., a Delaware corporation (together with its successors and assigns, the "**Company**"), issued this Security under an Indenture dated as of _____, (as amended, modified or supplemented from time to time in accordance therewith, the "**Base Indenture**"), as supplemented by the Supplemental Indenture dated as of _____, (the "**Supplemental Indenture**" and together with the Base Indenture, the "**Indenture**"), by and among the Company and _____, as trustee (in such capacity, the "**Trustee**"), to which reference is hereby made for a statement of the respective rights, obligations, duties and immunities thereunder of the Company, the Trustee and the Holders and of the terms upon which the Securities are, and are to be, authorized and delivered. All terms used in this Security that are defined in the Indenture shall have the meanings assigned to them therein.

1. **Interest.** The Company promises to pay interest on the principal amount of this Security at the rate per annum shown above. The Company will pay interest semiannually on _____ and _____ of each year, commencing _____, _____, until the principal is paid or made available for payment. Interest on the Securities will accrue from the most recent date to which interest has been paid or duly provided for or, if no interest has been paid, from _____, _____, *provided* that, if there is no existing default in the payment of interest, and if this Security is authenticated between a record date referred to on the face hereof and the next succeeding interest payment date, interest shall accrue from such interest payment date. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

2. **Method of Payment.** The Company will pay interest on the Securities (except defaulted interest, if any, which will be paid on such special payment date to Holders of record on such special record date as may be fixed by the Company or otherwise in accordance with the Indenture) to the persons who are registered Holders of Securities at the close of business on the [Insert record dates] immediately preceding the interest payment date. Holders must surrender Securities to a Paying Agent to collect principal payments. The Company will pay principal and interest in money of [Insert applicable country or currency] that at the time of payment is legal tender for payment of public and private debts.

3. **Paying Agent and Registrar.** Initially, the Trustee will act as Paying Agent and Registrar. The Company may change or appoint any Paying Agent, Registrar or co-Registrar without notice. The Company or any of its Subsidiaries or any of their Affiliates may act as Paying Agent, Registrar or co-Registrar.

4. **Optional Redemption.**¹ The Company may redeem the Securities at any time on or after _____, in whole or in part, at the following redemption prices (expressed as a percentage of their principal amount) together with interest accrued and unpaid to the date fixed for redemption:

If redeemed during the twelve-month period
commencing on _____ and ending on
_____ in each of the following years

Percentage

[Insert provisions relating to redemption at option of Holders, if any]

Notice of redemption will be sent at least 30 days but not more than 60 days before the redemption date to each Holder of Securities to be redeemed at its registered address. Securities in denominations larger than _____² may be redeemed in part. On and after the redemption date interest ceases to accrue on Securities or portions of them called for redemption, *provided* that if the Company shall default in the payment of such Securities at the redemption price together with accrued interest, interest shall continue to accrue at the rate borne by the Securities.

1 If applicable.

2 Insert applicable denominations and multiples.

5. Mandatory Redemption.³ The Company shall redeem [_____] % of the aggregate principal amount of Securities originally issued under the Indenture on each of [_____] , which redemptions are calculated to retire [_____] % of the Securities originally issued prior to maturity. Such redemptions shall be made at a redemption price equal to 100% of the principal amount thereof, together with accrued interest to the redemption date. The Company may reduce the principal amount of Securities to be redeemed pursuant to this Paragraph 5 by the principal amount of any Securities previously redeemed, retired or acquired, otherwise than pursuant to this Paragraph 5, that the Company has delivered to the Trustee for cancellation and not previously credited to the Company's obligations under this Paragraph 5. Each such Security shall be received and credited for such purpose by the Trustee at the redemption price and the amount of such mandatory redemption payment shall be reduced accordingly.

6. Denominations, Transfer, Exchange. The Securities are in registered form only without coupons in denominations of _____⁴ and integral multiples of _____ in excess thereof.⁵ A Holder may transfer or exchange Securities by presentation of such Securities to the Registrar or a co-Registrar with a request to register the transfer or to exchange them for an equal principal amount of Securities of other denominations. The Registrar may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and to pay any taxes and fees required by law or permitted by the Indenture. The Registrar need not transfer or exchange any Security selected for redemption or purchase, except the unredeemed or unpurchased part thereof if the Security is redeemed or purchased in part, or transfer or exchange any Securities for a period of 15 days before a selection of Securities to be redeemed or purchased.

7. Persons Deemed Owners. The registered Holder of this Security shall be treated as the owner of it for all purposes.

8. Unclaimed Money. Subject to any applicable abandoned property law, the Trustee and the Paying Agent shall pay to the Company upon written request any money held by them for the payment of principal or interest that remains unclaimed for two years, and thereafter, Holders entitled to the money must look to the Company for payment as general creditors.

9. Amendment, Supplement, Waiver. Subject to certain exceptions, the Indenture or the Securities may be amended or supplemented with the consent of the Holders of at least a majority in principal amount of the outstanding Securities of each Series affected by the amendment and any past default or compliance with any provision relating to any Series of the Securities may be waived in a particular instance with the consent of the Holders of a majority in principal amount of the outstanding Securities of such Series.⁶ Without the consent of any Securityholder, the Company and the Trustee may amend or supplement the Indenture or the Securities in certain respects as specified in the Indenture.

10. Successor Corporation. When a successor corporation assumes all the obligations of its predecessor under the Securities and the Indenture, the predecessor corporation will be released from those obligations.

11. Trustee Dealings With Company. Subject to certain limitations imposed by the TIA, the Trustee under the Indenture, in its individual or any other capacity, may make loans to, accept deposits from, and perform services for the Company or its affiliates, and may otherwise deal with the Company or its affiliates, as if it were not Trustee, including owning or pledging the Securities.

3 If applicable.

4 Insert applicable denominations and multiples.

5 Insert applicable denominations and multiples.

6 If different terms apply, insert a brief summary thereof.

12. No Recourse Against Others. A director, officer, employee or stockholder, as such, of the Company shall not have any liability for any obligations of the Company under the Securities or the Indenture or for any claim based on, in respect of or by reason of, such obligations or their creation. Each Holder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Securities. The waiver may not be effective to waive liabilities under the federal securities laws.

13. Discharge of Indenture. The Indenture contains certain provisions pertaining to defeasance and discharge, which provisions shall for all purposes have the same effect as if set forth herein.

14. Authentication. This Security shall not be valid until an authorized signatory of the Trustee signs the certificate of authentication on the other side of this Security.

15. Abbreviations. Customary abbreviations may be used in the name of a Holder or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= custodian), and U/G/M/A (= Uniform Gift to Minors Act).

16. GOVERNING LAW. THIS SECURITY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

17. CUSIP and ISIN Numbers. Pursuant to a recommendation promulgated by the Committee on Uniform Security Identification Procedures, the Company has caused CUSIP and ISIN numbers to be printed on the Securities and has directed the Trustee to use CUSIP and ISIN numbers in notices of repurchase as a convenience to Holders. No representation is made as to the accuracy of such numbers either as printed on the Securities or as contained in any notice of repurchase and reliance may be placed only on the other identification numbers placed thereon.

18. Copies. The Company will furnish to any Holder upon written request and without charge a copy of the Indenture and the applicable Authorizing Resolution or supplemental indenture. Requests may be made to: Atossa Therapeutics, Inc., 107 Spring Street, Seattle, Washington 98104, Telephone: (206) 588-0256, Attention: Senior Vice President, Finance & Accounting.

ASSIGNMENT FORM

If you the Holder want to assign this Security, fill in the form below:

I or we assign and transfer this Security to _____ (insert assignee's social security or tax ID number)

(Print or type assignee's name, address, and zip code)

and irrevocably appoint _____ agent to transfer this Security on the

books of the Company. The agent may substitute another to act for him.

Date: _____

Your signature
(Sign exactly as your name appears on the other side of this Security)

Signature Guarantee:

May 13, 2024

Atossa Therapeutics, Inc.
107 Spring Street
Seattle, Washington 98104

Re: Atossa Therapeutics, Inc.
Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Atossa Therapeutics, Inc., a Delaware corporation (the “Company”), in connection with the preparation and filing with the Securities and Exchange Commission (the “Commission”) of a Registration Statement on Form S-3 (the “Registration Statement”) under the Securities Act of 1933, as amended (the “Securities Act”), relating to the registration under the Securities Act and the proposed issuance and sale from time to time pursuant to Rule 415 under the Securities Act, together or separately and in one or more series (if applicable) of:

(i) the Company’s unsecured debt securities, which may either be senior debt securities (“Senior Debt Securities”), senior subordinated debt securities (“Senior Subordinated Debt Securities”) or junior subordinated debt securities (the “Junior Subordinated Debt Securities”) and, collectively with the Senior Debt Securities and the Senior Subordinated Debt Securities, the “Debt Securities”);

(ii) shares of the Company’s common stock, par value \$0.18 per share (the “Common Stock”);

(iii) shares of the Company’s preferred stock, par value \$0.001 per share (the “Preferred Stock”);

(iv) warrants for the purchase of Common Stock, Preferred Stock or Debt Securities (the “Warrants”); and

(x) units of the Company comprised of any combination of Debt Securities, Common Stock, Preferred Stock, or Warrants (the “Units”).

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The Debt Securities, Common Stock, Preferred Stock, Warrants and Units are collectively referred to herein as the “Securities.” The Senior Debt Securities are to be issued under an indenture to be entered into between the Company and a financial institution to be named at the time such indenture is executed (the “Trust Company”), as indenture trustee (the “Senior Base Indenture”). The Senior Subordinated Debt Securities are to be issued under an indenture to be entered into between the Company and Trust Company, as indenture trustee (the “Senior Subordinated Base Indenture”). The Junior Subordinated Debt Securities are to be issued under an indenture to be entered into between the Company and Trust Company, as indenture trustee (the “Junior Subordinated Base Indenture,” and together with the Senior Base Indenture and the Senior Subordinated Base Indenture, the “Base Indentures”).

In arriving at the opinions expressed below, we have examined originals, or copies certified or otherwise identified to our satisfaction as being true and complete copies of the originals, of forms of the Base Indentures, forms of the Debt Securities, specimen Common Stock certificates and such other documents, corporate records, certificates of officers of the Company and of public officials and other instruments as we have deemed necessary or advisable to enable us to render these opinions. In our examination, we have assumed the genuineness of all signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies. As to any facts material to these opinions, we have relied to the extent we deemed appropriate and without independent investigation upon statements and representations of officers and other representatives of the Company and others.

We have assumed without independent investigation that:

(i) at the time any Securities are sold pursuant to the Registration Statement (the “Relevant Time”), the Registration Statement and any supplements and amendments thereto (including post-effective amendments) will be effective and will comply with all applicable laws;

(ii) at the Relevant Time, a prospectus supplement will have been prepared and filed with the Commission describing the Securities offered thereby and all related documentation and will comply with all applicable laws;

(iii) all Securities will be issued and sold in the manner stated in the Registration Statement and the applicable prospectus supplement;

(iv) at the Relevant Time, all corporate or other action required to be taken by the Company to duly authorize each proposed issuance of Securities and any related documentation (including (i) the due reservation of any shares of Common Stock or Preferred Stock for issuance upon exercise, conversion or exchange of any Securities for Common Stock or Preferred Stock (a “Convertible Security”), and (ii) the execution (in the case of certificated Securities), delivery and performance of the Securities and any related documentation referred to

May 13, 2024

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in paragraphs 1 through 4 below) shall have been duly completed and shall remain in full force and effect;

(v) upon issuance of any Common Stock or Preferred Stock, including upon exercise, conversion or exchange of any Convertible Security, the total number of shares of Common Stock or Preferred Stock issued and outstanding will not exceed the total number of shares of Common Stock or Preferred Stock, as applicable, that the Company is then authorized to issue under its certificate of incorporation and other relevant documents;

(vi) in the case of Debt Securities, at the Relevant Time, the relevant trustee shall have been qualified under the Trust Indenture Act of 1939, as amended (the "TIA"), a Statement of Eligibility of the Trustee on Form T-1 shall have been properly filed with the Commission and the relevant Base Indenture shall have been duly executed and delivered by the Company and all other parties thereto and duly qualified under the TIA; and

(vii) at the Relevant Time, a definitive purchase, underwriting or similar agreement and any other necessary agreement with respect to any Securities offered or issued will have been duly authorized by all necessary corporate or other action of the Company and duly executed and delivered by the Company and the other parties thereto.

Based on the foregoing and in reliance thereon, and subject to the assumptions, exceptions, qualifications and limitations set forth herein, we are of the opinion that:

1. With respect to any Debt Securities, when:
 - a. the terms and conditions of such Debt Securities have been duly established by supplemental indenture or officers' certificate in accordance with the terms and conditions of the relevant Base Indenture;
 - b. any such supplemental indenture has been duly executed and delivered by the Company and the relevant trustee (together with the relevant Base Indenture, the "Indenture"); and
 - c. such Debt Securities have been executed (in the case of certificated Debt Securities), delivered and authenticated in accordance with the terms of the applicable Indenture and issued and sold for the consideration set forth in the applicable definitive purchase, underwriting or similar agreement, such Debt Securities will be legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms.
 2. With respect to any shares of Preferred Stock, when:
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- a. the certificate of designations relating to such Preferred Stock has been duly executed and filed with the Office of the Secretary of State of the State of Delaware;
 - b. such shares have been issued either (i) in accordance with the applicable definitive purchase, underwriting or similar agreement and for the consideration therefor provided for therein or (ii) upon exercise, conversion or exchange of any Convertible Security and for any additional consideration specified in such Convertible Security or the instrument governing such Convertible Security providing for such conversion or exercise, which consideration (including any consideration paid for such Convertible Security), on a per-share basis, shall in either event not be less than the par value of the Preferred Stock; and
 - c. any such Convertible Security was previously validly issued and is fully paid an non-assessable (in the case of an equity Security) or is a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, such shares of Preferred Stock will be validly issued, fully paid and non-assessable.
3. With respect to shares of Common Stock, when:
- a. such shares of Common Stock have been duly executed (in the case of certificated shares) and delivered either (i) in accordance with the applicable definitive purchase, underwriting or similar agreement for the consideration provided for therein, or (ii) upon conversion or exercise of any Convertible Security, in accordance with the terms of such Convertible Security or the instrument governing such Convertible Security providing for such conversion or exercise, and for any additional consideration specified therein, which consideration (including any consideration paid for such Convertible Security), on a per-share basis, shall in either event not be less than the par value of the Common Stock; and
 - b. any such Convertible Security was previously validly issued and is fully paid and non-assessable (in the case of an equity Security) or is a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, such shares of Common Stock will be validly issued, fully paid and non-assessable.
4. With respect to any Warrants, when:
-

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- a. the warrant agreement relating to such Warrants (the “Warrant Agreement”), if any, has been duly executed and delivered by the Company and each other party thereto;
 - b. the terms of the Warrants have been established in accordance with the Warrant Agreement, if any, and the applicable definitive purchase, underwriting or similar agreement; and
 - c. the Warrants have been duly executed (in the case of certificated Warrants) and delivered in accordance with the Warrant Agreement, if any, and the applicable definitive purchase, underwriting or similar agreement for the consideration provided for therein, such Warrants will be legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
5. With respect to any Units, when:
- a. the unit agreement relating to the Units (the “Unit Agreement”), if any, has been duly executed and delivered by the Company and each other party thereto;
 - b. the terms of the Units have been duly established in accordance with the Unit Agreement, if any, and the applicable definitive purchase, underwriting or similar agreement; and
 - c. the Units have been duly executed (in the case of certificated Units) and delivered in accordance with the Unit Agreement, if any, and the applicable definitive purchase, underwriting or similar agreement for the consideration provided for therein, the Units will be legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

The opinions expressed above are subject to the following exceptions, qualifications, limitations and assumptions:

- A. We render no opinion herein as to matters involving the laws of any jurisdiction other than the State of New York and the United States of America and, for purposes of paragraphs 2 and 3 above, the Delaware General Corporation Law. We are not admitted to practice in the State of Delaware; however, we are generally familiar with the Delaware General Corporation Law as currently in effect and have made such inquiries as we consider necessary to render the opinions contained in paragraphs 2 and 3 above. Without limitation, we do not express any opinion regarding any
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Delaware contract law. We assume no obligation to revise or supplement this opinion in the event of future changes in such laws or the interpretations thereof or such facts.

- B. The opinions above with respect to the Indenture, the Debt Securities, the Warrants, the Warrant Agreement, the Units and the Unit Agreement (collectively, the “Documents”) are each subject to (i) the effect of any bankruptcy, insolvency, reorganization, moratorium, arrangement or similar laws affecting the rights and remedies of creditors’ generally, including without limitation the effect of statutory or other laws regarding fraudulent transfers or preferential transfers, and (ii) general principles of equity, including without limitation concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance, injunctive relief or other equitable remedies regardless of whether enforceability is considered in a proceeding in equity or at law.
- C. We express no opinion regarding the effectiveness of (i) any waiver of stay, extension or usury laws or of unknown future rights; (ii) any waiver (whether or not stated as such) under the Indenture or any other Document of, or any consent thereunder relating to, unknown future rights or the rights of any party thereto existing, or duties owing to it, as a matter of law; (iii) any waiver (whether or not stated as such) contained in the Indenture or any other Document of rights of any party, or duties owing to it, that is broadly or vaguely stated or does not describe the right or duty purportedly waived with reasonable specificity; (iv) provisions relating to indemnification, exculpation or contribution, to the extent such provisions may be held unenforceable as contrary to public policy or federal or state securities laws or due to the negligence or willful misconduct of the indemnified party; (v) any provision in any Document waiving the right to object to venue in any court; (vi) any agreement to submit to the jurisdiction of any Federal court; (vii) any waiver of the right to jury trial or (viii) any provision to the effect that every right or remedy is cumulative and may be exercised in addition to any other right or remedy or that the election of some particular remedy does not preclude recourse to one or more others.
- D. To the extent relevant to our opinions in paragraphs 4 and 5 and not covered by our opinions in paragraphs 1, 2 or 3, we have assumed that any securities, currencies or commodities underlying, comprising or issuable upon exchange, conversion or exercise of any Warrants or Units are validly issued, fully paid and non-assessable (in the case of an equity security) or a legal, valid and binding obligation of the issuer thereof, enforceable against such issuer in accordance with its terms.

You have informed us that you intend to issue Securities from time to time on a delayed or continuous basis, and we understand that prior to issuing any Securities pursuant to the Registration Statement (i) you will advise us in writing of the terms thereof, and (ii) you will afford us an opportunity to (x) review the operative documents pursuant to which such Securities are to be issued or sold (including the applicable offering documents), and (y) file such

May 13, 2024

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supplement or amendment to this opinion (if any) as we may reasonably consider necessary or appropriate.

We consent to the filing of this opinion as an exhibit to the Registration Statement, and we further consent to the use of our name under the caption “Legal Matters” in the Registration Statement and the prospectus that forms a part thereof. In giving these consents, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Gibson, Dunn & Crutcher LLP

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3) and related Prospectus of Atossa Therapeutics, Inc. for the registration of common stock, preferred stock, debt securities, and warrants with a total value of up to \$100,000,000 and to the incorporation by reference therein of our report dated April 1, 2024, with respect to the consolidated financial statements of Atossa Therapeutics, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2023, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Seattle, Washington
May 13, 2024

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated March 22, 2023, relating to the consolidated financial statements of Atossa Therapeutics, Inc. (the Company) as of December 31, 2022 and for the year then ended, appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2023.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ BDO USA, P.C.
Seattle, Washington

May 13, 2024

Calculation of Filing Fee Tables

Form S-3
(Form Type)

Atossa Therapeutics, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

| | Security Type | Security Class Title | Fee Calculation or Carry Forward Rule | Amount Registered | Proposed Maximum Offering Price Per Unit | Maximum Aggregate Offering Price | Fee Rate | Amount of Registration Fee | Carry Forward Form Type | Carry Forward File Number | Carry Forward Initial effective date | Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward |
|------------------------------------|-------------------------------|--|---------------------------------------|-------------------|--|----------------------------------|------------|----------------------------|-------------------------|---------------------------|--------------------------------------|---|
| Newly Registered Securities | | | | | | | | | | | | |
| | Equity | Common Stock, \$0.18 par value per share | Rule 457(o) | (1) | (2) | (3) | | | | | | |
| | Equity | Preferred Stock, \$0.001 par value per share | Rule 457(o) | (1) | (2) | (3) | | | | | | |
| | Debt | Debt Securities | Rule 457(o) | (1) | (2) | (3) | | | | | | |
| | Other | Warrants | Rule 457(o) | (1) | (2) | (3) | | | | | | |
| | Other | Units | Rule 457(o) | (1) | (2) | (3) | | | | | | |
| | Unallocated (Universal) Shelf | | Rule 457(o) | (1) | (2) | \$100,000,000 | 0.00014760 | \$14,760.00 | | | | |
| Carry Forward Securities | | | | | | | | | | | | |
| Carry Forward Securities | N/A | N/A | N/A | N/A | | N/A | | | N/A | N/A | N/A | N/A |
| | Total Offering Amounts | | | | | | N/A | | N/A | | | |
| | Total Fees Previously Paid | | | | | | | | N/A | | | |
| | Total Fee Offsets | | | | | | | | N/A | | | |
| | Net Fee Due | | | | | | | | N/A | | | |

- (1) The amount to be registered consists of up to \$100,000,000 of an indeterminate amount of common stock, preferred stock, debt securities, warrants and/or units. There is also being registered hereunder such currently indeterminate number of (i) shares of common stock or other securities of the registrant as may be issued upon conversion of, or in exchange for, convertible or exchangeable shares of preferred stock and/or debt securities registered hereby, or (ii) shares of common stock, shares of preferred stock, debt securities or units as may be issued upon exercise of warrants registered hereby, as the case may be. Any securities registered hereunder may be sold separately or as units with the other securities registered hereunder.
- (2) The proposed maximum aggregate offering price per unit will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act.
- (3) Estimated solely for purposes of computing the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. In no event will the aggregate offering price of all securities sold by the registrant from time to time pursuant to this registration statement exceed \$100,000,000. No separate consideration will be received for (i) shares of common stock or other securities of the registrant that may be issued upon

conversion of, or in exchange for, convertible or exchangeable shares of preferred stock and/or debt securities registered hereby, or (ii) shares of common stock, shares of preferred stock, debt securities or units that may be issued upon exercise of warrants registered hereby, as the case may be.
